

SEVENTH FRAMEWORK PROGRAMME

**THEME [INCO.2010-6.1 INCO.2010-6.1 INCO]
[Eastern Europe and South Caucasus: Moldova, Georgia,
Ukraine, Belarus, Armenia, Azerbaijan Eastern Europe
and South Caucasus: Moldova, Georgia, Ukraine, Belarus,
Armenia, Azerbaijan Activities of International Cooperation]**

Grant agreement for: Coordination and support action*

Annex I - "Description of Work"
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Project acronym: ERAIHM

Project full title: " Advancing Research and Cooperation Capacities of IHM NASU towards ERA "

Grant agreement no: 266587

Date of preparation of Annex I (latest version): 2010-09-08

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A1: Project summary

Project Number ¹	266587	Project Acronym ²	ERAIHM
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One form per project

General information

Project title ³	Advancing Research and Cooperation Capacities of IHM NASU towards ERA		
Starting date ⁴	The first day of the month after the signature by the Commission		
Duration in months ⁵	28		
Call (part) identifier ⁶	FP7-INCO-2010-6		
Activity code(s) most relevant to your topic ⁷	INCO.2010-6.1: Eastern Europe and South Caucasus: Moldova, Georgia, Ukraine, Belarus, Armenia, Azerbaijan	INCO.2010-6.1: Eastern Europe and South Caucasus: Moldova, Georgia, Ukraine, Belarus, Armenia, Azerbaijan	INCO: Activities of International Cooperation
Free keywords ⁸	International cooperation, innovation system, capacity building, networking, dissemination toolkit, interactive backcasting		

Abstract ⁹

The ERAIHM project is designed to reinforce the cooperation capacities of one of the leading research centres of Ukraine - Institute of Hydromechanics of the National Academy of Sciences of Ukraine (IHM NASU) and enhancing its part participation in European Framework Programmes.

IHM NASU was founded in 1926 and is currently the largest center for research of a wide range of problems in modern fluid mechanics. IHM has a developed infrastructure of experimental tools, which is recognized as Ukrainian national heritage. Based on results of basic research IHM performs wide range of applied investigations in the areas included in such thematic priorities of Fp7 as energy, environment, transport and biotechnology.

The overall project objectives are:

- To develop a strategy of IHM NASU aimed at ensuring coherence of its RTD activities with socio-economic needs of Ukraine, enhancing its cooperation with European Research Centres and participation in European Framework Programmes.
- To develop and implement training modules at IHM NASU to build capacity in participation in Fp7 and to facilitate involvement of stakeholders in innovation process.
- To develop a Communication and dissemination toolkit for improvement of IHM visibility for Ukrainian and European research centres and stakeholders, networking, dissemination and exchange of scientific information and design of joint RTD activities.

The project consortium consists of IHM NASU, the Royal Institute of Technology (KTH, Sweden) and Delft University of Technology (TU Delft, The Netherlands). The EU partners will assist IHM in capacity building activities and application of tools and methods for assessment of its innovation potential and competitive advantage. They will also support networking with research centres in EU for scientific exchanges and joint projects formulation as well as building competence in application of interactive backcasting for stakeholders involvement in innovation process in Ukraine.

A2: List of Beneficiaries

Project Number ¹	266587	Project Acronym ²	ERAIHM
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List of Beneficiaries

No	Name	Short name	Country	Project entry month ¹⁰	Project exit month
1	INSTITUTE OF HYDROMECHANICS OF NATIONAL ACADEMY OF SCIENCES OF UKRAINE	IHM NASU	Ukraine	1	28
2	KUNGLIGA TEKNISKA HOEGSKOLAN	KTH	Sweden	1	28
3	TECHNISCHE UNIVERSITEIT DELFT	TU Delft	Netherlands	1	28

A3: Budget Breakdown

Project Number ¹	266587	Project Acronym ²	ERAHIM
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One Form per Project

Participant number in this project ¹¹	Participant short name	Fund. % ¹²	Ind. costs ¹³	Estimated eligible costs (whole duration of the project)				Total receipts	Requested EU contribution
				Coordination / Support (A)	Management (B)	Other (C)	Total A+B+C		
1	IHM NASU	75.0	T	174,196.00	13,719.60	0.00	187,915.60	0.00	169,843.00
2	KTH	75.0	T	139,560.00	0.00	0.00	139,560.00	0.00	124,441.00
3	TU Delft	75.0	A	151,231.00	0.00	0.00	151,231.00	0.00	91,479.00
Total				464,987.00	13,719.60	0.00	478,706.60	0.00	385,763.00

Note that the budget mentioned in this table is the total budget requested by the Beneficiary and associated Third Parties.

*** The following funding schemes are distinguished**

Collaborative Project (if a distinction is made in the call please state which type of Collaborative project is referred to: (i) Small of medium-scale focused research project, (ii) Large-scale integrating project, (iii) Project targeted to special groups such as SMEs and other smaller actors), Network of Excellence, Coordination Action, Support Action.

1. Project number

The project number has been assigned by the Commission as the unique identifier for your project, and it cannot be changed. The project number **should appear on each page of the grant agreement preparation documents** to prevent errors during its handling.

2. Project acronym

Use the project acronym as indicated in the submitted proposal. It cannot be changed, unless agreed during the negotiations. The same acronym **should appear on each page of the grant agreement preparation documents** to prevent errors during its handling.

3. Project title

Use the title (preferably no longer than 200 characters) as indicated in the submitted proposal. Minor corrections are possible if agreed during the preparation of the grant agreement.

4. Starting date

Unless a specific (fixed) starting date is duly justified and agreed upon during the preparation of the Grant Agreement, the project will start on the first day of the month following the entry into force of the Grant Agreement (NB : entry into force = signature by the Commission). Please note that if a fixed starting date is used, you will be required to provide a detailed justification on a separate note.

5. Duration

Insert the duration of the project in full months.

6. Call (part) identifier

The Call (part) identifier is the reference number given in the call or part of the call you were addressing, as indicated in the publication of the call in the Official Journal of the European Union. You have to use the identifier given by the Commission in the letter inviting to prepare the grant agreement.

7. Activity code

Select the activity code from the drop-down menu.

8. Free keywords

Use the free keywords from your original proposal; changes and additions are possible.

9. Abstract

10. The month at which the participant joined the consortium, month 1 marking the start date of the project, and all other start dates being relative to this start date.

11. The number allocated by the Consortium to the participant for this project.

12. Include the funding % for RTD/Innovation – either 50% or 75%

13. Indirect cost model

A: Actual Costs

S: Actual Costs Simplified Method

T: Transitional Flat rate

F :Flat Rate

Workplan Tables

Project number

266587

Project title

ERAIHM—Advancing Research and Cooperation Capacities of IHM NASU
towards ERA

Call (part) identifier

FP7-INCO-2010-6

Funding scheme

Coordination and support action

WT1

List of work packages

Project Number ¹	266587	Project Acronym ²	ERAIHM
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LIST OF WORK PACKAGES (WP)

WP Number ⁵³	WP Title	Type of activity ⁵⁴	Lead beneficiary number ⁵⁵	Person-months ⁵⁶	Start month ⁵⁷	End month ⁵⁸
WP 1	Management and Coordination	MGT	1	14.00	1	28
WP 2	Developing IHM NASU strategy for research, innovation and international cooperation	SUPP	3	41.00	2	20
WP 3	Capacity Building	SUPP	2	43.00	5	24
WP 4	Communication, networking and dissemination	SUPP	1	30.00	2	28
				Total	128.00	

WT2: List of Deliverables

Project Number ¹	266587	Project Acronym ²	ERAJHM
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List of Deliverables - to be submitted for review to EC

Deliverable Number ⁶¹	Deliverable Title	WP number ⁵³	Lead beneficiary number	Estimated indicative person-months	Nature ⁶²	Dissemination level ⁶³	Delivery date ⁶⁴
D1.1	Partnership agreement	1	1	1.50	O	CO	2
D1.2	Kick-off meeting including meetings of MG and SG	1	1	2.00	O	PU	2
D1.3	Activity reports, mid-term report and recommendations from SG and external experts	1	1	4.00	R	RE	18
D1.4	Final project conference, final statement from the SG	1	1	4.00	O	PU	27
D1.5	Final report	1	1	2.50	R	PU	28
D2.1	Guidelines for evaluation of IHM research scope and quality	2	2	2.00	R	PU	4
D2.2	Report on Self Evaluation of IHM Departments	2	1	5.00	R	CO	6
D2.3	Report on International Expert Review	2	2	2.00	R	RE	8
D2.4	Report on Bibliometric Analysis	2	1	3.00	R	RE	8
D2.5	Report on international evaluation of IHM research scope and quality	2	2	4.00	R	PU	10
D2.6	Framework for assessment of National Innovation System	2	3	2.00	O	PU	5

WT2: List of Deliverables

Deliverable Number ⁶¹	Deliverable Title	WP number ⁵³	Lead beneficiary number	Estimated indicative person-months	Nature ⁶²	Dissemination level ⁶³	Delivery date ⁶⁴
D2.7	Report on assessment of competitive advantage of Ukraine by sectors	2	3	11.00	R	PU	12
D2.8	Recommendations on improvement of innovation support system in Ukraine	2	1	6.00	O	PU	13
D2.9	Strategy Document of IHM NASU for RTD and international cooperation	2	1	6.00	O	PU	20
D3.1	Report on training needs analysis	3	2	2.00	R	RE	9
D3.2	Training programme, manual and materials on the Fp7	3	2	5.00	O	RE	14
D3.3	Training sessions on the Fp7	3	2	3.00	O	RE	18
D3.4	Guidelines and training manual for interactive backcasting exercise	3	3	9.00	O	RE	14
D3.5	Training session on theoretical bases and practical approaches to interactive backcasting	3	2	6.00	O	RE	15
D3.6	Report on interactive backcasting exercise	3	1	18.00	R	PU	24
D4.1	Communication and	4	1	2.00	O	RE	5

WT2: List of Deliverables

Deliverable Number ⁶¹	Deliverable Title	WP number ⁵³	Lead beneficiary number	Estimated indicative person-months	Nature ⁶²	Dissemination level ⁶³	Delivery date ⁶⁴
	dissemination plan						
D4.2	Web platform of IHM for online communication	4	1	6.00	O	PU	9
D4.3	Promotion materials: leaflets for IHM and the project, posters	4	1	4.00	O	PU	27
D4.4	Presentation of IHM for networking meetings	4	1	12.00	O	PU	26
D4.5	International symposium on innovation systems and competitive advantage	4	1	2.00	O	PU	17
D4.6	Workshop on interactive backcasting	4	1	2.00	O	PU	25
D4.7	Final conference, concluding statement of the conference	4	1	2.00	O	PU	27
Total				128.00			

WT3: Work package description

Project Number ¹	266587	Project Acronym ²	ERA IHM
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One form per Work Package

Work package number ⁵³	WP1	Type of activity ⁵⁴	MGT
Work package title	Management and Coordination		
Start month	1		
End month	28		
Lead beneficiary number ⁵⁵	1		

Objectives

Implementation of the project, quality control and monitoring of the progress and deliverables, reporting

Description of work and role of partners

This WP unites all activities related to project management, administration, reporting and accounting procedures. WP1 is lead by IHM (1).

Task 1: The initiative group representing the project partners will carry out start-up activities. The Partnership Agreement will be prepared and distributed among the project partners specifying roles and responsibilities, deliverables and funding allocations. The initiative group will also prepare the kick-off meeting bringing together the members of Management Group and Steering Group. The ultimate goal is that the Partnership Agreement is finalized and agreed at the Kick-off meeting.

Task 2: For strategic level coordination, steering group (SG) will be nominated consisting of 5 persons: one representative from each partner and 2 external representatives. External members of the SG will be selected as well-recognized international S&T policy representing Ukraine and EU. The SG will elect the chairman in its first meeting, organized in the framework of kick-off meeting. During the project implementation SG will meet face-to-face at least 2 more times – for midterm evaluation of the project progress after completion of the first year and on the stage of the project finalization and dissemination in the end of second year (preliminary 13th and 25th months of the project). If necessary, the SG will meet more often in case of serious problems with the project implementation, unexpected political developments, etc. The purpose of SG is to make final decisions related to project issues. Besides that SG will organize meetings with important stakeholders both in Ukraine and Europe: Cabinet of Ministries, Academy of Sciences, Agency for Innovation, EIT, CLUSTER, EU bodies and Agencies, etc. The decisions of SG shall be made on the base of consensus; in case when consensus could not be reached voting will be used where each member has one vote. Partners will thus be guaranteed influence on the project development as well as overall strategic responsibility for the project.

Task 3: Project Management Group (MG) will be set-up to carry out practical management and coordination of the project activities on daily basis. MG will consist of 5 persons: the project coordinator (IHM), leaders of 3 Workpackages: WP2 (TU Delft), WP3 (KTH) and WP4 (IHM) and the project financial manager (IHM). Activities of MG will be supported by the project secretary stationed at IHM. MG will meet 3 times during the project implementation: at the project kick-off meeting, mid-term meeting and end of the project for finalization of the documents and preparation of the report. At the same time the members of MG will be in contact with each other using electronic means: telephone, e-mail, Skype and video-conferencing. Such approach will contribute to efficient management of the project and, at the same time, efficient use of the project funds.

Task 4: Working groups (WG) lead by the WP manager for each WP will be appointed. WGs organize working meetings when necessary, but at least once a year. The responsibilities for implementing the tasks and financial issues will be regulated by partnership agreements.

Task 5. Midterm and final evaluation of the project. SG with involvement of the external experts will carry out midterm evaluation of the project implementation and the deliverables. For this purpose SG will organize meetings with leaders of the WPs and members of the WGs. SG will also evaluate the deliverables produced by

WT3: Work package description

the WGs. On the base of the discussion and review of the deliverables, the SG will produce statement with the conclusions and recommendations which will be presented on the midterm and final events.

All partners are involved in WP1. IHM will draw up partnership contracts outlining the technical and financial obligations of partners, including spending plans. The WP managers are responsible for reporting of activities of their WP to the LP at every six-month project period. Also, all partners have to regularly report their individual activities and use of project finances to the LP. Based on this information, LP will compile the summary reports of activities and finances and is responsible for the submission of the summary reports. All partners will be required to have a separate account for the project's expenses in their accounting system and hire a first level controller if there is no centralized system in the partnering country

Person-Months per Participant

Participant number ¹⁰	Participant short name ¹¹	Person-months per participant
1	IHM NASU	14.00
	Total	14.00

List of deliverables

Delive- rable Number ⁶¹	Deliverable Title	Lead benefi- ciary number	Estimated indicative person- months	Nature ⁶²	Dissemi- nation level ⁶³	Delivery date ⁶⁴
D1.1	Partnership agreement	1	1.50	O	CO	2
D1.2	Kick-off meeting including meetings of MG and SG	1	2.00	O	PU	2
D1.3	Activity reports, mid-term report and recommendations from SG and external experts	1	4.00	R	RE	18
D1.4	Final project conference, final statement from the SG	1	4.00	O	PU	27
D1.5	Final report	1	2.50	R	PU	28
	Total		14.00			

Description of deliverables

D1.1) Partnership agreement: The Partnership Agreement will be prepared and distributed among the project partners specifying roles and responsibilities, deliverables and funding allocations. The ultimate goal is that the Partnership Agreement is finalized and agreed at the Kick-off meeting. [month 2]

D1.2) Kick-off meeting including meetings of MG and SG: The initiative group representing the project partners will carry out start-up activities and it will prepare the kick-off meeting bringing together the members of Management Group and Steering Group. During the kick-off meeting the following tasks will be fulfilled: project detailed planning; creating task forces and working groups; establishing financial and reporting frameworks; finalization of Partnership Agreement. [month 2]

D1.3) Activity reports, mid-term report and recommendations from SG and external experts: The WP managers are responsible for reporting of activities of their WP to the LP at every six-month project period. Also, all partners have to regularly report their individual activities and use of project finances to the LP. Based on this information, LP will compile the summary reports of activities and finances and is responsible for the submission of the summary reports. SG with involvement of the external experts will carry out midterm evaluation of the project implementation and the deliverables. For this purpose SG will organize meetings with leaders of the WPs and members of the WGs. SG will also evaluate the deliverables produced by the WGs. On the base

WT3: Work package description

of the discussion and review of the deliverables, the SG will produce statement with the conclusions and recommendations which will be presented on the midterm review. [month 18]

D1.4) Final project conference, final statement from the SG: Following evaluation of the project outcomes and results, the SG will produce statement with the conclusions that will be presented during the Final Conference of the project. The MG and SG will have a final meeting during which the further cooperation plans will be discussed. [month 27]

D1.5) Final report: The Final report will be prepared my MG with input from WGs and submitted to EC by the Coordinator. [month 28]

Schedule of relevant Milestones

Milestone number ⁵⁹	Milestone name	Lead beneficiary number	Delivery date from Annex I ⁶⁰	Comments
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WT3: Work package description

Project Number ¹	266587	Project Acronym ²	ERA IHM
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One form per Work Package

Work package number ⁵³	WP2	Type of activity ⁵⁴	SUPP
Work package title	Developing IHM NASU strategy for research, innovation and international cooperation		
Start month	2		
End month	20		
Lead beneficiary number ⁵⁵	3		

Objectives

To develop a strategy of IHM NASU aimed at ensuring coherence of its RTD activities with socio-economic needs of Ukraine, enhancing its cooperation with European Research Centres and participation in European Framework Programmes

Description of work and role of partners

The WP2 will be chaired by TU Delft (the Partner 3) and will involve experts from all project partners and external well-recognized international S&T policy experts representing Ukraine and EU. The work will focus on developing a strategy of IHM NASU aiming at improving its international visibility and strengthening the IHM brand in the areas of its academic excellence with high societal relevance and business outreach, thus paving the way for international cooperation and participation in European Framework Programmes.

Research centres all over the world have a unique responsibility to take scientific advances forward into society, supporting existing companies as well as laying the foundations for emerging industrial sectors and enabling sustainable local and regional development. At a research centre, excellence in basic research must be matched by excellence in applied research and excellence in knowledge transfer, dissemination and exchange. Therefore, the IHM strategy will be based on results of two assessments: firstly, evaluation of IHM research scope and quality and secondly, overview of Ukrainian Innovation System and assessment of competitive advantage of Ukraine with focus on the scientific areas of IHM NASU.

The project team will consult the Bilat-Ukr project, Inconet-EECA, "Joint Support Office for Enhancing Ukraine's Integration in the EU Research Area", STCU and other available sources in order to avoid any duplication of work. The available materials will be used as much as possible.

Task 1: International evaluation of IHM research scope and quality
 Start time: month 2; Duration: 8 months
 Responsible Partner: 2 (KTH)

The purpose of the evaluation is to enable IHM to identify areas of existing research strength and emerging potential against an international benchmark. The evaluation itself is designed to initiate strategic process across the institute, within which all research staff would consider the future direction of their work. For the evaluation the methods of modified peer review will be applied together with the performance indicator model, which is based on bibliometric indicators and economic input-output models.

There are three operational aspects to this mode:

- Self-evaluation
- International experts review
- Bibliometric analysis

International expert panel will be invited to the peer review. The panel will involve representatives from the project partner institutions and external experts, who are professionals in the subject areas of IHM.

Task 2: Overview of Ukrainian Innovation System and assessment of competitive advantage of Ukraine
 Start time: month 3; Duration: 10 months
 Responsible Partner: 3 (TU Delft)

WT3: Work package description

Project team will perform overview of Ukrainian Innovation System and assessment of competitive advantage of Ukraine with focus on the scientific areas covered by IHM NASU. At the beginning of the project, the working group responsible for this task will consult the Bilat-Ukr project, Inconet-EECA, "Joint Support Office for Enhancing Ukraine's Integration in the EU Research Area", STCU and other available sources in order to avoid any duplication of work. The available materials will be used as much as possible.

The assessment will be performed by evaluation of 7 functions which describe concept of National Innovation System:

- Entrepreneurial activities
- Knowledge development
- Knowledge diffusion
- Guidance of the search
- Market formation
- Resource mobility
- Creation of legitimacy

On the base of this analysis the recommendations for stakeholders will be developed and distributed through various means including website of IHM and other project partners, on the project and networking events.

Task 3: Developing of IHM NASU strategy for RTD and international cooperation

Start time: month 12; Duration: 8 months

Responsible Partner: 1 (IHM)

The needs analysis aimed at improving IHM international visibility and strengthening the IHM brand in the areas of its academic excellence with high societal relevance and business outreach will be based on the results of two assessments:

- firstly, evaluation of IHM research scope and quality
- and secondly, overview of Ukrainian Innovation System and assessment of competitive advantage of Ukraine with focus on the scientific areas of IHM NASU

as well as SWOT analysis performed during the project preparation phase (section B1.1of DoW).

Based on the results above the WG will develop NASU strategy for RTD and international cooperation. This document will focus on several important components:

- Relevance of the research activities
- Increasing attractiveness as a partner for cooperation
- Becoming truly international in research activities
- Attracting talented workforce to the research activities
- Attracting young graduates as an attractive workplace
- Establishing strong internationally recognized brand of IHM
- Increasing cooperation with Private sector
- Ensuring stakeholders involvement into innovation processes
- Incorporating continuous quality evaluation mechanisms in the activities
- Development of the experimental base including external funding

Person-Months per Participant

Participant number ¹⁰	Participant short name ¹¹	Person-months per participant
1	IHM NASU	30.00
2	KTH	5.00
3	TU Delft	6.00
	Total	41.00

WT3: Work package description

List of deliverables

Deliverable Number ⁶¹	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature ⁶²	Dissemination level ⁶³	Delivery date ⁶⁴
D2.1	Guidelines for evaluation of IHM research scope and quality	2	2.00	R	PU	4
D2.2	Report on Self Evaluation of IHM Departments	1	5.00	R	CO	6
D2.3	Report on International Expert Review	2	2.00	R	RE	8
D2.4	Report on Bibliometric Analysis	1	3.00	R	RE	8
D2.5	Report on international evaluation of IHM research scope and quality	2	4.00	R	PU	10
D2.6	Framework for assessment of National Innovation System	3	2.00	O	PU	5
D2.7	Report on assessment of competitive advantage of Ukraine by sectors	3	11.00	R	PU	12
D2.8	Recommendations on improvement of innovation support system in Ukraine	1	6.00	O	PU	13
D2.9	Strategy Document of IHM NASU for RTD and international cooperation	1	6.00	O	PU	20
Total			41.00			

Description of deliverables

D2.1) Guidelines for evaluation of IHM research scope and quality: Guidelines for evaluation of IHM research scope and quality will be developed as a framework for evaluation exercise. The methods of modified peer review will be applied together with the performance indicator model, which is based on bibliometric indicators and economic input-output models. [month 4]

D2.2) Report on Self Evaluation of IHM Departments: In preparation for the Expert Panel evaluation, IHMs units of assessment will be asked to prepare an Evaluation Package, in which each of them will be asked: - to articulate its strategic ambitions for the future based on current strengths; - to quantify certain aspects of its research activities, particularly those indicating international quality or showing high potential for renewal. [month 6]

D2.3) Report on International Expert Review: The international Expert Panel will evaluate research quality and prepare the respective report. The Panel will receive the Self-Evaluation Packages generated by the IHMs units of assessment prior to a site visit to IHM. Further information including the CVs of research staff, a full lists of publications by these research staff and selected key publications including papers and books, will be available to the Expert Panel during the site visits. The Assessment Criteria: - Scientific Quality (Basic Research) - Applied Research Quality - Scholarship - Vitality and Potential - Strategy [month 8]

D2.4) Report on Bibliometric Analysis: To complement the Peer Review and data collected in the Self-Evaluation Packages, a Bibliometric Analysis of IHM's research quality will be conducted. The aim of this study is to assess the current scientific potential of the personnel presently employed at IHM; all publications produced during 1995–2010 by all members of the research staff will be assessed, whether accumulated when employed at IHM or elsewhere. Bibliometric indicators should therefore not be interpreted without detailed knowledge about the research units under assessment and the context of their research. This means that results will be used as a starting point for a deeper discussion on the positioning of research groups by IHM departments and management; especially if there is need for strategic change. [month 8]

WT3: Work package description

D2.5) Report on international evaluation of IHM research scope and quality: The Report on International Research Assessment Exercise summarising its three operational parts (Self-evaluation, International experts review, Bibliometric analysis) will be published by the project team. [month 10]

D2.6) Framework for assessment of National Innovation System: Framework for assessment of National Innovation System of Ukraine will be developed under leadership of TU Delft. This task will be performed by evaluation of 7 functions which describe concept of National Innovation System: - Entrepreneurial activities - Knowledge development - Knowledge diffusion - Guidance of the search - Market formation - Resource mobility - Creation of legitimacy [month 5]

D2.7) Report on assessment of competitive advantage of Ukraine by sectors: Report on assessment of competitive advantage of Ukraine by sectors will be prepared and published by the project team. [month 12]

D2.8) Recommendations on improvement of innovation support system in Ukraine: On the base of assessment of competitive advantage of Ukraine by sectors the recommendations for stakeholders will be developed and distributed through various means including website of IHM and other project partners, on the project and networking events. [month 13]

D2.9) Strategy Document of IHM NASU for RTD and international cooperation: Based on results of IHM research quality evaluation and assessment of National Innovation System of Ukraine the project WG will develop IHM strategy for RTD and international cooperation. This document will focus on several important components: - Relevance of the research activities - Increasing attractiveness as a partner for cooperation - Becoming truly international in research activities - Attracting talented workforce to the research activities - Attract young graduates as an attractive workplace - Establishing strong internationally recognized brand of IHM - Incorporating continuous quality evaluation mechanisms in the activities Development of the experimental base including external funding [month 20]

Schedule of relevant Milestones

Milestone number ⁵⁹	Milestone name	Lead beneficiary number	Delivery date from Annex I ⁶⁰	Comments
MS4	International evaluation of IHM research quality	2	10	Report on International evaluation is published
MS5	Assessment of competitive advantage of Ukraine	3	12	Report on Assessment is published
MS7	Strategy of IHM NASU for RTD and international cooperation	1	20	Strategy is adopted by IHM Board

WT3: Work package description

Project Number ¹	266587	Project Acronym ²	ERAIHM
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One form per Work Package

Work package number ⁵³	WP3	Type of activity ⁵⁴	SUPP
Work package title	Capacity Building		
Start month	5		
End month	24		
Lead beneficiary number ⁵⁵	2		

Objectives

To develop and implement training modules at IHM NASU to build capacity in participation in Fp7 and to facilitate involvement of stakeholders in innovation process

Description of work and role of partners

The WP3 will be coordinated by KTH (the Partner 2) and will involve experts from all project partners. The project team will be supported by National Information Center for Ukraine-EC S&T cooperation with information on best practices of participation of Ukrainian Research Centres and Universities in European Framework Programs and lessons learned.

The two main areas for training of IHM staff (FP7 and stakeholders involvement in RTD) have been defined during the IHM SWOT analysis performed on the project preparation stage and described in the section 1.1. As a research center, IHM bears responsibility to disseminate its research results out into industry and society. Such responsibility must be carefully managed and include the awareness and understanding of technology's long-term effects. In the process of developing new technologies, many stakeholders play a role, representing various interests. In order to generate the resources that are required for a major technological change, it is important to develop a high degree of consensus among stakeholders, in an open and interactive process. IHM NASU as most of Ukrainian research centers has limited experience in stakeholders involvement into innovation processes and lacks competences in using modern methods for facilitating sustainable innovations. Interactive backcasting has been applied as a method that both creates consensus on future goals for technological development and guides the innovation process over time. The method was widely applied in the Dutch Sustainable Technology Development program where it became explicitly a tool for setting sustainable innovations in motion. Moreover, it emphasized the importance of interactions, as only in this way, stakeholders could develop the required commitment (Weaver et al., 2000). It is showed that the effects of backcasting interventions could be made plausible, even after several years, which implied that the method worked (Quist, 2007).

Therefore, the project team under supervision of Partner 3 (TU Delft) will develop and implement a training module for IHM staff on interactive backcasting. It will be based on the experience of successful application of the method by EU partners and related competences of the IHM staff identified at the beginning of the project. For the training on the Fp7 the working group chaired by Partner 2 (KTH) will identify competence gaps and training needs of IHM staff to enhance participation in Fp7. The identified needs/gaps will be used as an input for development and implementation of training modules for IHM staff.

The training modules on the Fp7 for research managers and young researchers at IHM NASU will be based on experiences of partners 2 and 3 (KTH and TU Delft) as well as best practices of participation of Ukrainian Research Centres in FP7. During this task the project team will cooperate with JSO, the Bilat-Ukr, the NIP Ukraine and the Inconet-EECA and use their training material and experiences as much as possible. To ensure high quality results of capacity building, the training in both areas will use project-based methodology and approach of learning-by-doing. Thus, training activities will include implementation of interactive backcasting exercise and drafting Fp7 applications by the trainees in their respective research areas.

Task 1: Identification of capacity gaps and training needs of IHM staff to enhance participation in Fp7 and to facilitate involvement of stakeholders in its RTD activities.

Start time: month 5; Duration: 4 months

Responsible Partner: 2 (KTH)

WT3: Work package description

The appointed WG will identify capacity gaps and training needs of IHM staff to enhance participation in Fp7 and to facilitate involvement of stakeholders in its RTD activities. This will be done by analysis of interviews with different groups at IHM such as IHM and its Departments leaders, research managers and young researchers. Literature study and interviews with Ukrainian S&T policy experts will be performed for identifying show cases of stakeholders involvement in innovation processes in Ukraine. Report on the training needs analysis (D 3.1., month 9) will summarise results of these surveys and it will be used as an input for development and implementation of training modules for IHM staff.

Task 2: Developing and implementing training modules on the Fp7

Start time: month 10; Duration: 9 months

Responsible Partner: 3 (KTH)

The training modules on the Fp7 for research managers and young researchers at IHM NASU will be based on experiences of European partners as well as best practices of participation of Ukrainian Research Centres in FP7.

The project team chaired by KTH will develop training programme, manual and materials (D 3.2.) by month 14. During this task the project team will cooperate with JSO, the Bilat-Ukr, the NIP Ukraine and the Inconet-EECA and use their training material and experiences as much as possible.

Training course on the Fp7 for IHM staff will take place during months 14-18. It will consist of intensive training sessions and distance part, where trainees will draft Fp7 applications in groups in their respective research areas. The distance work will be supervised by tutors from EU and Ukraine empowered IHM webplatform.

The training results will be evaluated through feedback forms, interviews with participants and internal assessment of the drafted applications. The recommendations of further training activities will be used as an input to the IHM Strategy (WP2, D 2.9)

Task 3: Developing and implementing Interactive Backcasting Exercise

Start time: month 12; Duration: 12 months

Responsible Partner: 2 (TU Delft)

The project team under supervision of Partner 3 (TU Delft) will develop and implement a training module for IHM staff on interactive backcasting based on the experience of successful application of the method by EU partners and related competences of the IHM staff identified at the beginning of the project.

The WG will develop Guidelines and training manual for interactive backcasting exercise by month 14.

Training session on theoretical bases and practical approaches to interactive backcasting for IHM research managers and researchers will be run during 1 week (month 15) by EU project partners. The framework of the interactive backcasting and the main methods to be used will be presented and discussed, including

- Participation and interaction: workshops, visioning, creativity stimulation, brain storms;
- Design and scenario methods: modeling, forecasting;
- Analysis and modelling methods: LCA, effect analysis, stakeholder analysis;
- Management methods for Process-, Project-, and Network management.

Using an approach of learning-by-doing, the IHM trainees will perform an interactive backcasting exercise for the aim of creation a sustainable district heating system of a selected city of Ukraine.

The five steps of the interactive backcasting process will be performed:

Step 1: Strategic Problem orientation (Analysis)

Step 2: Prepare a vision of a desirable future (Vision)

Step 3: Back-casting (What do we need to make this come true?)

Step 4: Further elaboration, detailing

Step 5: Implementation, Policy implications, organizing embedding & follow-up

All these steps will require stakeholders involvement by using Interactive methods: interviews, workshops, consensus building.

Besides the competences in interactive backcasting approach, the exercise will improve skills of IHM staff in project management, team building, communication and process evaluation.

Report on interactive backcasting exercise with its description, evaluation and recommendations will be prepared by month 24 and presented to decision makers and academic community in Ukraine during a workshop organised within WP4 (D 4.6, month 25)

WT3: Work package description

Person-Months per Participant

Participant number ¹⁰	Participant short name ¹¹	Person-months per participant
1	IHM NASU	32.00
2	KTH	7.00
3	TU Delft	4.00
Total		43.00

List of deliverables

Deliverable Number ⁶¹	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature ⁶²	Dissemination level ⁶³	Delivery date ⁶⁴
D3.1	Report on training needs analysis	2	2.00	R	RE	9
D3.2	Training programme, manual and materials on the Fp7	2	5.00	O	RE	14
D3.3	Training sessions on the Fp7	2	3.00	O	RE	18
D3.4	Guidelines and training manual for interactive backcasting exercise	3	9.00	O	RE	14
D3.5	Training session on theoretical bases and practical approaches to interactive backcasting	2	6.00	O	RE	15
D3.6	Report on interactive backcasting exercise	1	18.00	R	PU	24
Total			43.00			

Description of deliverables

D3.1) Report on training needs analysis: Report on the training needs analysis will summarise results of surveys on capacity gaps and training needs of IHM staff to enhance participation in Fp7 and to facilitate involvement of stakeholders in its RTD activities. The Report will be used as an input for development and implementation of training modules for IHM staff. [month 9]

D3.2) Training programme, manual and materials on the Fp7: The training modules on the Fp7 for research managers and young researchers at IHM NASU will be based on experiences of European partners as well as best practices of participation of Ukrainian Research Centres in FP7. The project team chaired by KTH will develop training programme, manual and materials by month 14. [month 14]

D3.3) Training sessions on the Fp7: Training course on the Fp7 for IHM staff will take place during months 14-18. It will consist of intensive training sessions and distance part, where trainees will draft Fp7 applications in groups in their respective research areas. The distance work will be supervised by tutors from EU and Ukraine empowered IHM webplatform. [month 18]

D3.4) Guidelines and training manual for interactive backcasting exercise: The WG will develop Guidelines and training manual for interactive backcasting exercise by month 14. The training modules will be based on the experience of successful application of the method by EU partners and related competences of the IHM staff identified at the beginning of the project. [month 14]

D3.5) Training session on theoretical bases and practical approaches to interactive backcasting: Training session on theoretical bases and practical approaches to interactive backcasting for IHM research managers and researchers will be run during 1 week (month 15) by EU project partners. The framework of the interactive backcasting and the main methods to be used will be presented and discussed, including - Participation and

WT3: Work package description

interaction: workshops, visioning, creativity stimulation, brain storms; - Design and scenario methods: modeling, forecasting; - Analysis and modelling methods: LCA, effect analysis, stakeholder analysis; - Management methods for Process-, Project-, and Network management. Using an approach of learning-by-doing, the IHM trainees will perform an interactive backcasting exercise for the aim of creation a sustainable district heating system of a selected city of Ukraine. The five steps of the interactive backcasting process will be performed: Step 1: Strategic Problem orientation (Analysis) Step 2: Prepare a vision of a desirable future (Vision) Step 3: Back-casting (What do we need to make this come true?) Step 4: Further elaboration, detailing Step 5: Implementation, Policy implications, organizing embedding & follow-up All these steps will require stakeholders involvement by using Interactive methods: interviews, workshops, consensus building. [month 15]

D3.6) Report on interactive backcasting exercise: Report on interactive backcasting exercise with its description, evaluation and recommendations will be prepared by month 24 and presented to decision makers and academic community in Ukraine during a workshop organised within WP4 [month 24]

Schedule of relevant Milestones

Milestone number ⁵⁹	Milestone name	Lead beneficiary number	Delivery date from Annex I ⁶⁰	Comments
MS3	Identification of capacity gaps and training needs of IHM staff	2	9	Report on training needs analysis
MS6	Training sessions on the Fp7	2	18	Number of retrained participants,
MS8	Training in interactive backcasting	3	24	Number of retrained participants,

WT3: Work package description

Project Number ¹	266587	Project Acronym ²	ERA IHM
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One form per Work Package

Work package number ⁵³	WP4	Type of activity ⁵⁴	SUPP
Work package title	Communication, networking and dissemination		
Start month	2		
End month	28		
Lead beneficiary number ⁵⁵	1		

Objectives

To develop a Communication and dissemination toolkit for improvement of IHM visibility for Ukrainian and European research centres and stakeholders, networking, dissemination and exchange of scientific information and design of joint RTD activities

Description of work and role of partners

This WP unites all activities related to communication and networking with external stakeholders; dissemination of information on project content and deliverables; improvement of IHM visibility for Ukrainian and European research centres and stakeholders; networking for exchange of scientific information and design of joint RTD activities. IHM (1) will be the WP leader while all project partners will participate in the activities of this WP.

Task 1. Developing communication and dissemination plan for efficient reach of various stakeholders both in Ukraine and EU countries

Start time: month 2; Duration: 3 months

Responsible Partner: 1 (IHM)

The plan for communication and dissemination will be developed by the working group of this package tuned for reaching important target groups:

- European research centres and networks
- Research institutions in Ukraine
- Decision makers including National Academy of Sciences of Ukraine, Cabinet of Ministers of Ukraine, National Agency for Innovations, Ministry of Education and Science
- Industrial companies and public authorities
- National Information Centre for Ukraine-EC S&T cooperation
- Ukrainian Science and Technology Centre

This plan then will be followed during the entire project lifetime.

Task 2. Developing a web-platform of IHM for online communication with the stakeholders, distribution of information and marketing

Start time: month 3; Duration: 6 months

Responsible Partner: 1 (IHM)

The WG will review existing web-presence of IHM; will prepare structure and concept of information delivery for the websites in Ukrainian and English. The websites will be built taking to consideration target groups for Ukrainian and English version as well as principle of consistency of information. The web-platform will be developed in a way that allows easy and smooth updating of information, light-weight graphics for easy access with wide range of Internet users.

The web platform will also incorporate tools for online communication and discussions during preparation of joint research project.

Task 3. Development and production of promotion materials: leaflets for IHM (English and Ukrainian), project leaflet, posters.

Start time: month 3; Duration: 4 months

Responsible Partner: 1 (IHM)

WT3: Work package description

These materials will be developed on the base of materials produced within WP2 and WP3 and distributed during the project events, meetings with the stakeholders, international mobility of IHM staff as well as during the events organised with the participation of EU partner institutions and through their networks.

Task 4. Networking using structures of the European partner institutions

Start time: month 12; Duration: 14 months

Responsible Partner: (IHM - European Mechanics Society; KTH – Nordic, CLUSTER, EIT KIC InnoEnergy; TU Delft - IDEA League)

IHM research potential and cooperation possibilities will be presented on the events organised in the framework of networks where European projects partners are involved:

- European Mechanics Society
- Nordic 5
- CLUSTER
- IDEA League
- EIT KIC InnoEnergy

Task 5. Organising international symposium on innovation support system in Ukraine and Ukrainian competitive advantage

Start time: month 14; Duration: 3 months

Responsible Partner: 1 (IHM)

The project team will organise international symposium on innovation support system in Ukraine and Ukrainian competitive advantage with focus on the scientific areas covered by IHM NASU.

This event will bring together professionals in the field of innovation policy and experts in sustainable technology management from Ukraine and EU:

- National Academy of Sciences of Ukraine,
- Cabinet of Ministers of Ukraine,
- National Agency for Innovations,
- Ministry of Education and Science
- STCU

Furthermore representatives from leading Ukrainian industries, local and regional authorities will be invited

This event 2 project deliverables will be presented and discussed:

- Report on assessment of competitive advantage of Ukraine by sectors
- Recommendations on improvement of innovation support system in Ukraine

We estimate the audience of this event on the level of 40 persons.

Task 6. Workshop for presenting the experience of interactive backcasting exercise conducted within the project

Start time: month 24; Duration: 1 month

Responsible Partner: 1 (IHM)

The project team presents results of the interactive backcasting to decision makers and academic community in Ukraine for dissemination of acquired experience in use of this method for facilitation of involvement of various stakeholders in innovation process and linkage of Ukrainian RTD with social-economic needs of the society.

We estimate the audience to 80 persons.

Task 7. Final project conference

Start time: month 25; Duration: 2 months

Responsible Partner: 1 (IHM)

The final project event will be organised in Ukraine for presentation of the project results, sharing experience gained by the WGs, and impact of the project on IHM NASU and Ukrainian academic community.

The event will target wide range of stakeholders:

- Representatives from Ukrainian and European research centres
- S&T international policy experts
- Decision makers
- Leading Ukrainian industrialists
- Public sector partners

During the conference the Ukrainian and European colleagues will get opportunity for further networking activities and planning for joint R&D projects. Expected audience is 120 persons.

WT3: Work package description

All activities of the project will be covered in Ukrainian mass-media. Representatives from media companies will be invited to the project events, press-relises will be distributed among local magazines and newspapers. In framework of the events press-conferences will be organised with participation of Ukrainian and EU representatives as well as interviews with the VIP guests and keynote speakers.

Person-Months per Participant

Participant number ¹⁰	Participant short name ¹¹	Person-months per participant
1	IHM NASU	26.00
2	KTH	2.00
3	TU Delft	2.00
Total		30.00

List of deliverables

Delive- rable Number ⁶¹	Deliverable Title	Lead benefi- ciary number	Estimated indicative person- months	Nature ⁶²	Dissemi- nation level ⁶³	Delivery date ⁶⁴
D4.1	Communication and dissemination plan	1	2.00	O	RE	5
D4.2	Web platform of IHM for online communication	1	6.00	O	PU	9
D4.3	Promotion materials: leaflets for IHM and the project, posters	1	4.00	O	PU	27
D4.4	Presentation of IHM for networking meetings	1	12.00	O	PU	26
D4.5	International symposium on innovation systems and competitive advantage	1	2.00	O	PU	17
D4.6	Workshop on interactive backcasting	1	2.00	O	PU	25
D4.7	Final conference, concluding statement of the conference	1	2.00	O	PU	27
Total			30.00			

Description of deliverables

D4.1) Communication and dissemination plan: The plan for communication and dissemination will be developed by the working group of this package tuned for reaching important target groups: - European research centres and networks - Research institutions in Ukraine - Decision makers including National Academy of Sciences of Ukraine, Cabinet of Ministers of Ukraine, National Agency for Innovations, Ministry of Education and Science - Industrial companies and public authorities - National Information Centre for Ukraine-EC S&T cooperation - Ukrainian Science and Technology Centre This plan then will be followed during the entire project lifetime. [month 5]

D4.2) Web platform of IHM for online communication: The IHM website will be built taking to consideration target groups for Ukrainian and English version as well as principle of consistency of information. The web-platform will be developed in a way that allows easy and smooth updating of information, light-weight graphics for easy access with wide range of Internet users. The web platform will also incorporate tools for online communication and discussions during preparation of joint research project. [month 9]

WT3: Work package description

D4.3) Promotion materials: leaflets for IHM and the project, posters: Promotion materials: leaflets for IHM (English and Ukrainian), project leaflet and posters will be developed on the base of materials produced within WP2 and WP3 and distributed during the project events, meetings with the stakeholders, international mobility of IHM staff as well as during the events organised with the participation of EU partner institutions and through their networks. [month 27]

D4.4) Presentation of IHM for networking meetings: IHM research potential and cooperation possibilities will be presented on the events organised in the framework of networks where European projects partners are involved: - European Mechanics Society - Nordic 5 - CLUSTER - IDEA League - EIT KIC InnoEnergy [month 26]

D4.5) International symposium on innovation systems and competitive advantage: International symposium on innovation support system in Ukraine and Ukrainian competitive advantage will bring together professionals in the field of innovation policy and experts in sustainable technology management from Ukraine and EU: - National Academy of Sciences of Ukraine, - Cabinet of Ministers of Ukraine, - National Agency for Innovations, - Ministry of Education and Science - STCU Furthermore, representatives from leading Ukrainian industries, local and regional authorities will be invited. [month 17]

D4.6) Workshop on interactive backcasting: During the workshop the project team will present results of the interactive backcasting to decision makers and academic community in Ukraine for dissemination of acquired experience in use of this method for facilitation of involvement of various stakeholders in innovation process and linkage of Ukrainian RTD with social-economic needs of the society. [month 25]

D4.7) Final conference, concluding statement of the conference: The final project event will be organised in Ukraine for presentation of the project results, sharing experience gained by the WGs, and impact of the project on IHM NASU and Ukrainian academic community. The event will target wide range of stakeholders: - Representatives from Ukrainian and European research centres - S&T international policy experts - Decision makers - Leading Ukrainian industrialists - Public sector partners During the conference the Ukrainian and European colleagues will get opportunity for further networking activities and planning for joint R&D projects. [month 27]

Schedule of relevant Milestones

Milestone number ⁵⁹	Milestone name	Lead beneficiary number	Delivery date from Annex I ⁶⁰	Comments
MS1	Communication and dissemination strategy	1	3	Communication and dissemination Plan is adopted
MS2	Web platform of IHM	1	9	Web platform of IHM is on-line and fully operational

WT4: List of Milestones

Project Number ¹	266587	Project Acronym ²	ERAIHM
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List and Schedule of Milestones

Milestone number ⁵⁹	Milestone name	WP number ⁵³	Lead beneficiary number	Delivery date from Annex I ⁶⁰	Comments
MS1	Communication and dissemination strategy	WP4	1	3	Communication and dissemination Plan is adopted
MS2	Web platform of IHM	WP4	1	9	Web platform of IHM is on-line and fully operational
MS3	Identification of capacity gaps and training needs of IHM staff	WP3	2	9	Report on training needs analysis
MS4	International evaluation of IHM research quality	WP2	2	10	Report on International evaluation is published
MS5	Assessment of competitive advantage of Ukraine	WP2	3	12	Report on Assessment is published
MS6	Training sessions on the Fp7	WP3	2	18	Number of retrained participants,
MS7	Strategy of IHM NASU for RTD and international cooperation	WP2	1	20	Strategy is adopted by IHM Board
MS8	Training in interactive backcasting	WP3	3	24	Number of retrained participants,

WT5: Tentative schedule of Project Reviews

Project Number ¹	266587	Project Acronym ²	ERAIHM
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Tentative schedule of Project Reviews

Review number ⁶⁵	Tentative timing	Planned venue of review	Comments, if any
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Project Effort by Beneficiary and Work Package

Project Number ¹	266587	Project Acronym ²	ERAIHM
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Indicative efforts (man-months) per Beneficiary per Work Package

Beneficiary number and short-name	WP 1	WP 2	WP 3	WP 4	Total per Beneficiary
1 - IHM NASU	14.00	30.00	32.00	26.00	102.00
2 - KTH	0.00	5.00	7.00	2.00	14.00
3 - TU Delft	0.00	6.00	4.00	2.00	12.00
Total	14.00	41.00	43.00	30.00	128.00

Project Effort by Activity type per Beneficiary

Project Number ¹	266587	Project Acronym ²	ERAIHM
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Indicative efforts per Activity Type per Beneficiary

Activity type	Part. 1 IHM NAS	Part. 2 KTH	Part. 3 TU Delf	Total
3. Consortium Management activities				
WP 1	14.00	0.00	0.00	14.00
Total Management	14.00	0.00	0.00	14.00
4. Other activities				
Total other	0.00	0.00	0.00	0.00
Work Packages for Support activities				
WP 2	30.00	5.00	6.00	41.00
WP 3	32.00	7.00	4.00	43.00
WP 4	26.00	2.00	2.00	30.00
Total Support	88.00	14.00	12.00	114.00
Total	102.00	14.00	12.00	128.00

WT8: Project Effort and costs

Project Number ¹	266587	Project Acronym ²	ERAIHM
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Project efforts and costs

Beneficiary number	Beneficiary short name	Estimated eligible costs (whole duration of the project)						Total receipts (€)	Requested EU contribution (€)
		Effort (PM)	Personnel costs (€)	Subcontracting (€)	Other Direct costs (€)	Indirect costs OR lump sum, flat-rate or scale-of-unit (€)	Total costs		
1	IHM NASU	102.00	80,033.00	21,100.00	58,980.00	27,802.60	187,915.60	0.00	169,843.00
2	KTH	14.00	78,933.00	0.00	37,367.00	23,260.00	139,560.00	0.00	124,441.00
3	TU Delft	12.00	67,657.00	0.00	17,838.00	65,736.00	151,231.00	0.00	91,479.00
Total		128.00	226,623.00	21,100.00	114,185.00	116,798.60	478,706.60	0.00	385,763.00

1. Project number

The project number has been assigned by the Commission as the unique identifier for your project. It cannot be changed. The project number **should appear on each page of the grant agreement preparation documents (part A and part B)** to prevent errors during its handling.

2. Project acronym

Use the project acronym as given in the submitted proposal. It cannot be changed unless agreed so during the negotiations. The same acronym **should appear on each page of the grant agreement preparation documents (part A and part B)** to prevent errors during its handling.

53. Work Package number

Work package number: WP1, WP2, WP3, ..., WPn

54. Type of activity

For all FP7 projects each work package must relate to one (and only one) of the following possible types of activity (only if applicable for the chosen funding scheme – must correspond to the GPF Form Ax.v):

- **RTD/INNO** = Research and technological development including scientific coordination - applicable for Collaborative Projects and Networks of Excellence
- **DEM** = Demonstration - applicable for collaborative projects and Research for the Benefit of Specific Groups
- **MGT** = Management of the consortium - applicable for all funding schemes
- **OTHER** = Other specific activities, applicable for all funding schemes
- **COORD** = Coordination activities – applicable only for CAs
- **SUPP** = Support activities – applicable only for SAs

55. Lead beneficiary number

Number of the beneficiary leading the work in this work package.

56. Person-months per work package

The total number of person-months allocated to each work package.

57. Start month

Relative start date for the work in the specific work packages, month 1 marking the start date of the project, and all other start dates being relative to this start date.

58. End month

Relative end date, month 1 marking the start date of the project, and all end dates being relative to this start date.

59. Milestone number

Milestone number: MS1, MS2, ..., MSn

60. Delivery date for Milestone

Month in which the milestone will be achieved. Month 1 marking the start date of the project, and all delivery dates being relative to this start date.

61. Deliverable number

Deliverable numbers in order of delivery dates: D1 – Dn

62. Nature

Please indicate the nature of the deliverable using one of the following codes

R = Report, **P** = Prototype, **D** = Demonstrator, **O** = Other

63. Dissemination level

Please indicate the dissemination level using one of the following codes:

- **PU** = Public
- **PP** = Restricted to other programme participants (including the Commission Services)
- **RE** = Restricted to a group specified by the consortium (including the Commission Services)
- **CO** = Confidential, only for members of the consortium (including the Commission Services)

- **Restreint UE** = Classified with the classification level "Restreint UE" according to Commission Decision 2001/844 and amendments
- **Confidentiel UE** = Classified with the mention of the classification level "Confidentiel UE" according to Commission Decision 2001/844 and amendments
- **Secret UE** = Classified with the mention of the classification level "Secret UE" according to Commission Decision 2001/844 and amendments

64. Delivery date for Deliverable

Month in which the deliverables will be available. Month 1 marking the start date of the project, and all delivery dates being relative to this start date

65. Review number

Review number: RV1, RV2, ..., RVn

66. Tentative timing of reviews

Month after which the review will take place. Month 1 marking the start date of the project, and all delivery dates being relative to this start date.

67. Person-months per Deliverable

The total number of person-month allocated to each deliverable.

PART B – Narrative information

Proposal full title:

Advancing Research and Cooperation Capacities of IHM NASU towards ERA

Proposal acronym:

ERA IHM

Proposal number:

266587

Type of funding scheme:

Coordination and support actions (Supporting)

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B1. Concept and objectives, quality and effectiveness of the support mechanisms and associated work plan

B 1.1 Concept and project objectives

The ERAHIM project is designed to reinforce the cooperation capacities of one of the leading research centres of Ukraine - Institute of Hydromechanics of the National Academy of Sciences of Ukraine (IHM NASU) and enhancing its part participation in European Framework Programmes. This overall goal is in-line with the objective of the INCO ERA-WIDE action to reinforce the cooperation capacities of research centres located in the ENP countries, including Ukraine. Following the aim stipulated in the call FP7-INCO-2010-6, the project will provide Ukraine the possibility to improve the research activities of one of its highest quality research centres – IHM NASU in the thematic priorities of FP7.

IHM NASU was founded in 1926 and is currently the largest center for research of a wide range of problems in modern fluid mechanics. IHM has a developed infrastructure of experimental tools, which is recognized as Ukrainian national heritage. Based on results of basic research IHM performs wide range of applied investigations in the areas included in such thematic priorities of Fp7 as energy, environment, transport and biotechnology.

The overall project **objectives** are:

- To develop a strategy of IHM NASU aimed at ensuring coherence of its RTD activities with socio-economic needs of Ukraine, enhancing its cooperation with European Research Centres and participation in European Framework Programmes.
- To develop and implement training modules at IHM NASU to build capacity in participation in Fp7 and to facilitate involvement of stakeholders in innovation process.
- To develop a Communication and dissemination toolkit for improvement of IHM visibility for Ukrainian and European research centres and stakeholders, networking, dissemination and exchange of scientific information and design of joint RTD activities.

Decisions on the project strategy, specific tasks and methods to be used have been made based on IHM SWOT analysis as demonstrated below.

IHM SWOT Analysis

Introduction

Institute of Hydromechanics (IHM) of the National Academy of Sciences of Ukraine was founded in 1926 and is currently the largest center for research of a wide range of problems in modern fluid mechanics.

In the former Soviet Union, most research projects in the IHM were associated with the problems of hydrodynamics, which were stimulated by military applications. Such applications inspired research in the field of high-speed motion of bodies in the liquid (different types of torpedoes), in hydrodynamic acoustics (the creation of active and passive systems to detect submarines), in the dynamics of stratified fluids, control of flows in the boundary layer, including the study of the effect of polymers and other methods to reduce resistance. The military orientation of research in IHM prevented the development of collaboration between scientists of the Institute with colleagues from the United States and European Research Centers.

After the secession from the Soviet Union military programs in the IHM were terminated. The Institute got involved in international cooperation. The first international grants were received under the program of support for scientists of the former Soviet Union by the Soros

Foundation. ADONIS project should be mentioned because it aimed at creating infrastructure in Ukraine to ensure the participation of Ukrainian programmers in European projects. The project was funded by the European Union.

Currently, the Institute is contracted to conduct research with research centers in the U.S. (Cortana CORPORATION, University of Illinois at Urbana-Champaign, Washington University in St. Louis), Sweden (Royal Institute of Technology, Royal Academy of Sciences), The Netherland (Eindhoven University of Technology), France (Toulon University, Systems Navals Complexes Laboratory), Germany (DLR, Gottingen), China (China Ship Scientific Research Center, Wuxi city; Technical University, Harbin city) etc.

IHM SWOT Analysis Summary

<i>Internal conditions</i>		<i>External environment</i>	
<i>Internal conditions</i>	<p><u>Strengths</u></p> <ul style="list-style-type: none"> - Highly qualified team of scientists capable of carrying out theoretical and experimental research on current problems of hydrodynamics - Excellent experimental facilities and infrastructure - Close cooperation in education and research with leading technical universities in Ukraine - Experience in international cooperation - The coordinating role of the IHM in its scientific areas in Ukraine - Support for research projects and the infrastructure of the Institute by the Ukrainian government - Access to main scientific information resources and high quality reliable Internet access 	<i>External environment</i>	<p><u>Opportunities</u></p> <ul style="list-style-type: none"> - Improving visibility of IHM and enlarging of international cooperation - The possibility of creation of new areas of scientific research focused on the application of the results in the development of renewable energy - Using the experience of European partners in the creation of new training courses for engineers to meet the challenges of sustainable development - Possibility of exchange programs for young scientists for more effective exploitation of the latest achievements of colleagues from European research centers - Gaining experience of participation in major European programs - More intensive participation in European RTD projects and in Fp7 will support the high level of scientific research, attract young scientists as well as prevent the brain drain
	<p><u>Weaknesses</u></p> <ul style="list-style-type: none"> - Absence of well-structured English web platform - Lack of experience of participation in Fp7 - Limited experience of multilateral international cooperation in scientific research. Main emphasis was placed on bilateral cooperation - Limited engagement of stakeholders in joint research - Lack of developed strategy in order to increase our scope in regional coverage and to improve responses to the socio-economic needs of Ukraine - Insufficient modern measurement equipments 		<p><u>Threats</u></p> <ul style="list-style-type: none"> - Insufficient financial support of scientific investigations and experimental tools from government, industrial companies and other stakeholders - Brain drain due to insufficient financial support - Ageing personnel structure in many key areas of excellence - Lack of well organized innovation support system in Ukraine - Lack of the legislation system for knowledge's commercialization and technology transfer

IHM Strengths

S1. Highly qualified team of scientists capable of carrying out theoretical and experimental research on current problems of hydrodynamics:

The total number of IHM staff is more than 250 people, including 27 full professors (doctors of sciences).

12 scientific departments of IHM cover the research in all directions of modern hydromechanics, including:

- Study of the characteristics of fluid flows in channels considering phase transitions;
- Development of methods for flows control in the boundary layer for drag reduction to the motion of bodies in the fluid.
- Development of methods for direct numerical simulation of fluid flows.
- Study of sound generation by flow and development of methods for monitoring the efficiency of conversion of kinetic energy flux into the energy of sound.
- Study of the interaction of surface waves with the shore and engineering structures in the coastal zone.

Based on results of basic research IHM performs wide range of applied investigations. The design engineering bureau of IHM provides experimental investigations and development special measuring tools.

IHM research groups have focus on development of applications of renewable energy to energy sector of Ukraine, in particular, introduction of high-tech green technology in compliance with all European requirements for the design, installation and maintenance of data systems, as well as the development of legal and technical framework for the development of these technologies in Ukraine. The goal lies not only in establishment of the plants that use renewable energy sources, but also adaptation of science intensive and high-tech plants for conditions in Ukraine.

Institute has joint projects on fuel cell technology with KTH and Washington University in St. Louis. IHM provides the optimization of the hydrodynamic design of fuel cells based on the combination of mathematical and experimental approaches.

List of 15 main publications (in English)

1. Grinchenko V. T The biharmonic problem and progress in the development of analytical methods for the solution of boundary-value problems. Journal of Engineering Mathematics, 2003, vol.46, N 3, p. 281-297.
2. V. T. Grinchenko, V. V. Meleshko, A. A. Gourjii, G. J. F. van Heijst, and A. H. M. Eisenga, Two Approaches to the Analysis of the Coaxial Interaction of Vortex Rings Int. J. Fluid Mech. Res., 2003, Vol. 30, No. 2, pp.166-183
3. Grinchenko V. T Features of Wave propagation in Liquid-Filled Cylinders with Compliant Walls., International journal of fluid mechanics research, vol.31, N 6, 2004, 574-590
4. A.A. Gourjii, V.V. Meleshko, E.I. Nikiforovich, and R.J. Adrian, Dynamics of hairpin vortex packets in wall turbulence. Appl. Hydromech., 2006, **8**, No 2, 26-49.
5. Nikiforovich E. Asymptotic spatio-temporal properties of laminar boundary layers over curved surfaces International journal of fluid mechanics research, v.1 (73) pp. 38-51, 1999 v.1 (73) pp. 38-51
6. Nikiforovich E., Boundary Layer Flows in the Presence of Body Forces and Atmospheric Structures Phys. Chem. Earth (A), vol. 25, #12, p.p. 781-783, 2000
7. V. T. Grinchenko and A. F. Ulitko _On Local Singularities in Mathematical Models of Physical Fields, J. Math. Sci., 1999, Vol. 97, No. 1, 3777-3795
8. V. T. Grinchenko and N. S. Gorodetskaya , Lamb Waves Scattering by Inhomogeneities in Elastic Waveguides , J. Acoust. Soc. Am., 2000, Vol. 108. No. 5, Pt. 2, p. 2574

9. V. T. Grinchenko and V. T. Matsypura, Sound Radiation from an Open End of the Wedge-Shaped Waveguide (Parts I & II). *Int. J. Fluid Mech. Res.*, 2001, Vol. 28, No. 3, pp.341-367
10. V. Vovk, V. T. Grinchenko, S. L. Dakhnov, V. V. Krizhanovskiy, and V. N. Oliynik, Human Respiratory Sounds: Objectivization of the Auscultatory Signs , *Int. J. Fluid Mech. Res.*, 2001, Vol. 28, No. 6, pp.772-786
11. V. T. Grinchenko and G. L. Komissarova, Characteristics of Normal Waves in Elastic-Fluid Cylindrical Waveguide, *Int. J. Fluid Mech. Res.*, 2002, Vol. 29, No. 6, pp.742-759
12. V.V. Meleshko and G.J.F. van Heijst, Mixing of viscous fluid in a rectangular cavity.— *Math. Methods Phys.-Mech. Fields*, 2006, **49**, No 1, 43-52
13. Grinchenko V.T., Komissarova G.L. Features of Wave Propagation in Liquid-Filled Cylinders with Complaint Walls. *Int. J. Fluid Mech. Res.*, 2004, 31, 6, p.574-590.
14. Basovski V.G., Vovk I.V., Vovk O.I. On Generation of Total Sound Vibrations by Airflow in Stenotic Airways. *Int. J. Fluid Mech. Res.*, 2004, 31, 5, p.456-476.
15. Selezov I.T., Avramenko O.V., Gurtovy Yu.V. Features of Wave-Packet Propagation in Two-Layer Fluid of Finite Depth. *Int. J. Fluid Mech. Res.*, 2007, 34, 5, p.475-491.

List of patents with Ukrainian government ownership and/or developed under government sponsorship:

1. Patent for invention, #73850. *Casing of an apparatus*
2. Patent for invention, #84319. *Wind-power unit*
3. Patent for a useful model, # 18126. *Damping and stabilizing coating*
4. Patent for a useful model, # 23347. *A sensor for auscultation*
5. Patent for a useful model, # 32582. *Protecting cofferdam for deep cuts*
6. Patent for a useful model, # 44278. *Torsion device*
7. Patent for a useful model, # 45469. *A sensor of the microphone type for auscultation of life activity sounds of human and animal organism*
8. The declaration patent for a useful model, #9793. *A generator of internal waves*
9. The declaration patent for a useful model, #13144. *Flying vehicle*
10. The declaration patent for a useful model, #14732. *Acoustic sensor*
11. The declaration patent for a useful model, #16097. *Wind-power unit*

S2. Excellent experimental facilities and infrastructure

IHM has a developed infrastructure of experimental tools, which is recognized as Ukrainian national heritage and receives special funding from the national budget. The Institute has experimental pool to model the behavior of surface and underwater vehicles with different modes of towing. Hydrodynamic pipes and special devices allow to study high-speed motion of bodies in the water in supercavitation at speeds close to the speed of sound in water. IHM

has a special testing ground for the simulation of the interaction of surface waves with the shore and engineering constructions. System of special experimental trays can simulate the behavior of hydraulic structures on rivers.

Joint Ukrainian - Swedish Research Laboratory on Sustainable Energy and Environmental Technologies in cooperation with Royal Institute of Technology (KTH, Sweden) and National Technical University of Ukraine "Kiev Polytechnic Institute". is equipped by modern heat pump technology tools and provides the preparation of specialists in this area.

S3. Close cooperation in education and research with leading technical universities in Ukraine

IHM is a major training center in Ukraine in the field of fluid mechanics and acoustics. The Institute carries out training of Doctors of Sciences and PhD students in cooperation with leading technical universities in Ukraine, including National Technical University of Ukraine "Kiev Polytechnic Institute", National Aviation University, East-Ukrainian Technical University (Luhansk), Technical University (Poltava).

S4. Experience in international cooperation

IHM hosted several international conferences with the financial support of international organizations: NATO, EUROMECH, Research Center of the U.S. Air Force, American Institute of Physics.

The institute is contracted to conduct research with research centers in the USA, Russia, Sweden, The Netherlands, France, Germany, China etc.

Main projects supported by international funds:

UKE2-2813-KV-06 "Optimization of the Hydrodynamic Design of Fuel Cells: A Combination of Mathematical and Experimental Approaches" – financed by CRDF (Civil Research Development Fund, U.S.A.);

UP2-2429-KV-02 "The modeling of the dynamics of hairpin vortex packets in wall turbulence" with Talbot Laboratory, University of Illinois and financed by U.S. Civilian Research and Development Foundation;

"Risk scenario modeling of the spreading of contaminants in coastal waters" – supported by Royal Swedish Academy of Sciences;

"Two-dimensional Coherent Vortex Structures" - supported by Eindhoven University of Technology (TUE) and the Netherlands Organization for Scientific Research (NWO);

"Discrete Vortex Models of Turbulent Flows" – supported by University of Illinois at Urbana-Champaign, USA and the US National Science Foundation grant CTS-9311545;

"Optimization of Boundary Layers control based on Receptivity Studies" -Joint Israelian - Ukrainian project financed by Ministries of Sciences of Israel and Ukraine;

"Nonlinear problems of boundary layers in the presence of body forces" - Joint Israeli - Ukrainian project financed by Ministries of Sciences of Israel and Ukraine;

"Development of Polymeric Lithium Rechargeable Battery Based on a Nanostructured Pyrite Cathode" –financed by the Science and Technology Center in Ukraine;

SPC-94-4059 "A new approach to the study of organized vortical motion effected by body forces" - EOARD, Wright Laboratory at Wright-Patterson AFB, OH,

"Vortex Structures and Heat Transfer in the Driven Cavities" – financed by National Aerospace Laboratories, Bangalore, India;

"Active Control of separated vortex flows" supported by Politecnico di Torino, Italy;

"Coherent Structure Dynamics in Boundary Layers" - Joint Sino-Ukrainian Project, Tianjin University, China.

INTAS projects:

Pan-European Network on Flow, Turbulence and Combustion
Project "Boundary Layers Study and Control".

Solar Energy and Natural Resources in Eastern Europe
Project "Transport Processes in the Vegetation community"

Project "Biological efficiency of forest management and environment protection"

S5. The coordinating role of the IHM in its scientific areas in Ukraine

IHM is a major research center in Ukraine in the field of fluid mechanics and acoustics. For more than 10 years Institute publishes two journals: "Applied Fluid Mechanics" and "Acoustic Vestnik". Both journals have being published in the USA.

S6. Support for research projects and the infrastructure of the Institute by the Ukrainian Government

IHM has receives special funding from the national budget to support infrastructure of experimental tools, which is recognized as Ukrainian national heritage.

Main scientific projects financed by National funds:

- Development of physic-mathematical models for determining of the acousto-mechanical properties of heterogeneous media saturated with a fluid or gas
- Development of methods for controlling sound generation processes in the waveguide systems in presence of a fluid or gas flow
- Effects of thermodynamical irreversibility in multiphase continuum
- Mathematical modeling of physical phenomena in polymer electrolyte fuel cells

S7. Access to main scientific information resources and high quality reliable Internet access

IHM Weaknesses

- Absence of well-structured English web platform creates difficulties in communication with Western partners, as well as makes it harder to find potential partners for joint projects
- Lack of experience of participation in Fp7

- Limited experience of multilateral international cooperation in scientific research. Main emphasis was placed on bilateral cooperation
- Limited engagement of stakeholders in joint research.
- Lack of developed strategy in order to increase our scope in regional coverage and to improve responses to the socio-economic needs of Ukraine
- Insufficient modern measurement equipments

IHM Opportunities

- Improving visibility of IHM and enlarging of international cooperation
- The possibility of creation of new areas of scientific research focused on the application of the results in the development of renewable energy
- Using the experience of European partners in the creation of new training courses for engineers to meet the challenges of sustainable development
- Possibility of exchange programs for young scientists for more effective exploitation of the latest achievements of colleagues from European research centers
- Gaining experience of participation in major European programs
- More intensive participation in European RTD projects and in Fp7 will support the high level of scientific research, attract young scientists as well as prevent the brain drain

IHM Threats

- Insufficient financial support of scientific investigations and experimental tools from government, industrial companies and other stakeholders
- Brain drain due to insufficient financial support
- Ageing personnel structure in many key areas of excellence
- Lack of well organized innovation support system in Ukraine
- Lack of the legislation system for knowledge's commercialization and technology transfer

SWOT Analysis became a base to identification of needs IHM that will be met in the project through:

- Developing a strategy of IHM NASU aiming at improving its international visibility and strengthening the IHM brand in the areas of its academic excellence with high societal relevance and business outreach, thus paving the way for international cooperation and participation in European Framework Programmes. The IHM strategy will be based on results of two assessments: firstly, evaluation of IHM research scope and quality and secondly, overview of Ukrainian Innovation System and assessment of competitive advantage of Ukraine. This will be done within WP2 of the project.
- Capacity building of its staff in participation in the Fp7 and to involvement of stakeholders in innovation process. This will be done within WP3 of the project under coordination by KTH (the Partner 2) and will involve experts from all project partners. The project team will be supported by National Information Center for Ukraine-EC S&T cooperation with information on best practices of participation of Ukrainian Research Centres and Universities in European Framework Programs and lessons learned.

- Development of a communication and dissemination toolkit within WP 4 will improve IHM visibility for Ukrainian and European research centres and stakeholders, enhance networking, dissemination and exchange of scientific information and design of joint RTD activities.

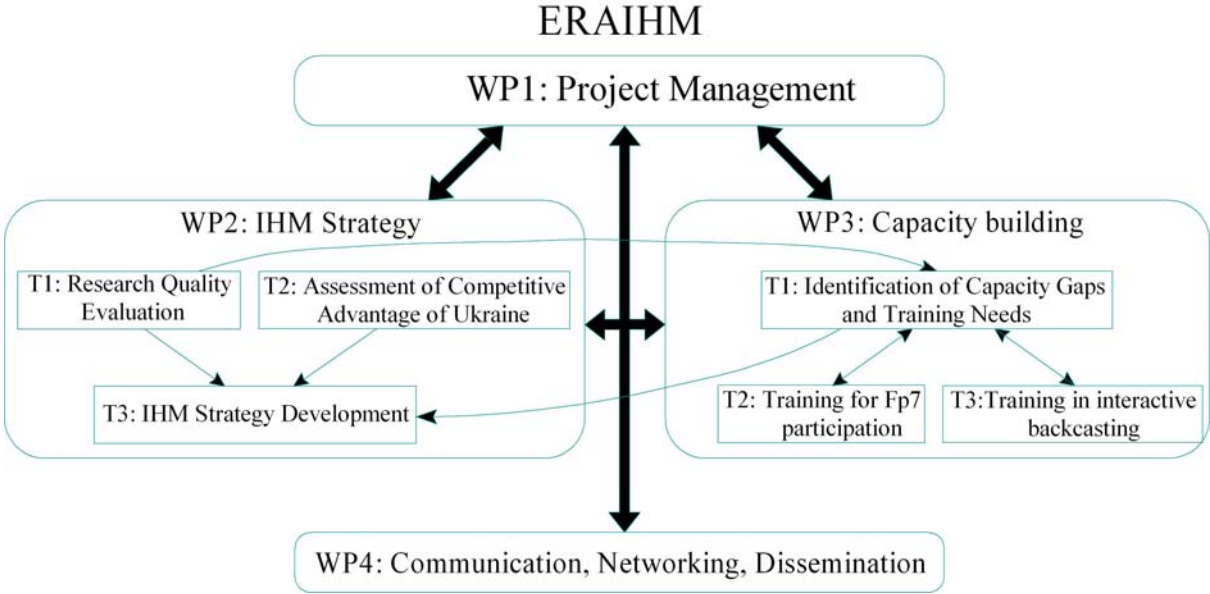
B 1.2 Quality and effectiveness of the support mechanisms and associated work Plan

Overall strategy of the work plan and methodology

The project consists of 4 work packages. Work package 1 includes all activities related to coordination and management of the project including financial management and reporting. Work package 4 is dedicated to dissemination, networking and communication work uniting efforts of the project partners in reaching stakeholders, making the project sound and visible and promoting use of the project deliverables. Activities within work packages 2 and 3 will produce main project deliverables. Being implemented during overlapping time periods, these work packages are interconnected and results from the activities in one work package function as inputs for activities in the other one (see next figure). The project work packages are:

1. **WP1: Management and Coordination.** The aim of WP1 is to provide well functioning framework for implementation of the project, efficient use of the project funds, quality control and monitoring of the progress and deliverables, reporting to SG and the EC. Activities of the WP1 are being implemented during entire lifetime of the project.
2. **WP2: Developing IHM NASU strategy for research, innovation and international cooperation.** Objective of WP2 is to develop a strategy of IHM NASU aimed at ensuring coherence of its RTD activities with socio-economic needs of Ukraine, enhancing its cooperation with European Research Centres and participation in European Framework Programmes. Activities within this WP are implemented during Month 2 – Month 20.
3. **WP3: Capacity Building.** Objective of this WP is to develop and implement training modules at IHM NASU to build capacity in participation in Fp7 and to facilitate involvement of stakeholders in innovation process. This WP is implemented during Month 5 – Month 24 of the project and it is closely connected with the WP2.
4. **WP4: Communication, networking and dissemination.** The aim of WP4 is to develop a Communication and dissemination toolkit for improvement of IHM visibility for Ukrainian and European research centres and stakeholders, networking, dissemination and exchange of scientific information and design of joint RTD activities. This WP includes measure for reaching various stakeholders, raising awareness on the work carried out by the project partners as well as disseminating the project results.

The figure below illustrates the work packages, interdependencies among them as well as tasks in each one of them.



Significant risks and associated contingency plans

Within the framework of the WP1 a constant process of project monitoring and quality control will be in place so that risks are identified and tackled with before they actually become a problem or start influence negatively the project implementation. While conducting SWOT analysis at IHM the threats were identified, which are considered as risks during the project lifetime and sustainability of the project results:

- Insufficient financial support of scientific investigations and experimental tools from government, industrial companies and other stakeholders.

In order to meet this threat, at the beginning of the project the project team will make a list of sources of finances and respective stakeholders to be invited to dissemination events of the project. This will improve visibility of IHM among national and international financial institutions and industrial partners and will promote the IHM as an excellent research institution.

Within a task of IHM's strategy development the project team will define research themes of high societal relevance. These themes will be submitted to the Cabinet of Ministers of Ukraine through the National Academy of Science of Ukraine to be included in the priority list of scientific research topics for national budget financing.

Joint research projects in cooperation of IHM with the project EU partners (KTH and TU Delft) will be planned within the project.

- Brain drain due to insufficient financial support

Besides the measures dedicated to improvement of research financing at IHM, the specific attention will be given to improvement of possibilities for carrier development and participation in international research projects for young scientists. These measures will be included in the IHM strategy.

- Ageing personnel structure in many key areas of excellence

The project team will ensure that all PhD students and young scientists are invited to participate in the project activities, especially ones devoted to capacity building. A part of the IHM strategy development will be dedicated to solving of ageing problem.

- Lack of the legislation system for knowledge's commercialization and technology transfer

The project team will cooperate with Science Park "Kiev Polytechnic" that is the leading institution developing and testing the new instruments and legal regulations of technology transfer in Ukraine to acquire best practices gained in Ukraine. The project team will organise international symposium on innovation support system in Ukraine and Ukrainian competitive advantage. This event will bring together professionals in the field of innovation policy and experts in sustainable technology management from Ukraine and EU, which will be an important input for improvement of innovation support system in Ukraine.

One more risk related to this project and methods used in it is related to lack of experience among stake holders in participation in backcasting exercises together with academia and public institutions. This could result in unwillingness or low level of interest among the involved parties. Therefore, the related activities will be prepared well in advance.

Workplan

No	Activities/month																														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		
WP1	Management and coordination																														
	Start-up activities and preparation of partnership agreement (SG, MG, Partnership agreement)																														
	Kick-off meeting																														
	Midterm evaluation																														
	Final statement from SG and final report																														
WP2	Developing IHM NASU strategy for research, innovation and international cooperation																														
	International evaluation of IHM research scope and quality																														
	Overview of Ukrainian Innovation System and assessment of competitive advantage of Ukraine																														
	Developing of IHM NASU strategy for RTD and international cooperation																														
WP3	Capacity Building																														
	Identification of capacity gaps and training needs of IHM staff to enhance participation in Fp7 and to facilitate involvement of stakeholders in its RTD activities																														
	Developing and implementing training modules on the Fp7																														
	Developing and implementing Interactive Backcasting Exercise																														
WP4	Communication, networking and dissemination																														
	Developing communication and dissemination plan																														
	Developing a web-platform of IHM for online communication																														
	Development and production of promotion materials																														
	Networking using structures of the European partner institutions																														
	Organising international symposium on innovation support system in Ukraine and Ukrainian competitive advantage																														
	Workshop for presenting the experience of interactive backcasting excessive																														
	Final project conference																														

Table of events (by deliverables)

Deliverable number	Event name	Expected month of delivery	Planned location
D1.2	Kick-off meeting including meetings of MG and SG	Month 2	Kiev
D1.3	MG meeting for mid-term evaluation and reporting	Month 18	Kiev
D1.4	Final MG meeting and final statement from the SG	Month 27	Kiev
D 2.1	Study visit and workshop on experiences of organisation of international evaluation of KTH research scope and quality	Month 3	Stockholm
D 2.5	Meeting for discussions of results of international evaluation of IHM research scope and quality	Month 10	Kiev
D3.3	Study visit and training session on best practices of KTH in Fp7	Month 14	Stockholm
D3.3	Training session on best practices of Ukrainian institutions in Fp7	Month 15	Kiev
D3.3	Study visit and training session on best practices of TU Delft in Fp7	Month 16	Delft
D 3.3	Training session on writing Fp7 proposals (based on prepared ideas)	Month 18	Kiev
D 3.4	Workshop for preparation of interactive backcasting exercise	Month 12	Delft
D3.5	Training session on theoretical bases and practical approaches to interactive backcasting	Month 15	Kiev
D4.5	International symposium on innovation systems and competitive advantage of Ukraine	Month 17	Kiev
D4.6	Workshop on interactive backcasting	Month 24	Kiev
D4.7	Final conference	Month 27	Kiev

Table of events (by expected month of delivery)

Event name	Expected month of delivery	Deliverable number	Planned location
Kick-off meeting including meetings of MG and SG	Month 2	D1.2	Kiev
Study visit and workshop on experiences of organisation of international evaluation of KTH research scope and quality	Month 3	D 2.1	Stockholm
Meeting for discussions of results of international evaluation of IHM research scope and quality	Month 10	D 2.5	Kiev
Workshop for preparation of interactive backcasting exercise	Month 12	D 3.4	Delft
Study visit and training session on best practices of KTH in Fp7	Month 14	D3.3	Stockholm
Training session on best practices of Ukrainian institutions in Fp7	Month 15	D3.3	Kiev
Training session on theoretical bases and practical approaches to interactive backcasting	Month 15	D3.5	Kiev
Study visit and training session on best practices of TU Delft in Fp7	Month 16	D3.3	Delft
International symposium on innovation systems and competitive advantage of Ukraine	Month 17	D4.5	Kiev
Training session on writing Fp7 proposals (based on prepared ideas)	Month 18	D 3.3	Kiev
MG meeting for mid-term evaluation and reporting	Month 18	D1.3	Kiev
Workshop on interactive backcasting	Month 24	D4.6	Kiev
Final MG meeting and final statement from the SG	Month 27	D1.4	Kiev
Final conference	Month 27	D4.7	Kiev

B2. Implementation

B 2.1 Management structure and procedures

In order to ensure efficient and smooth implementation of the project activities the roles and responsibilities of the project partners will be clearly defined in the Partnership Agreement (PA). The PA will be communicated to all project partners prior to the kick-off meeting for acquaintance and comments. The PA is expected to be finalized and signed at the project kick-off meeting and it will further regulate participation of the partners in the project activities, their contribution in terms of workforce and deliverables as well as reimbursement for the work done together with the schedule of reporting and payments.

The organisational structure of the project consists of a Steering Group and the project Management Group. Their responsibility is as follows:

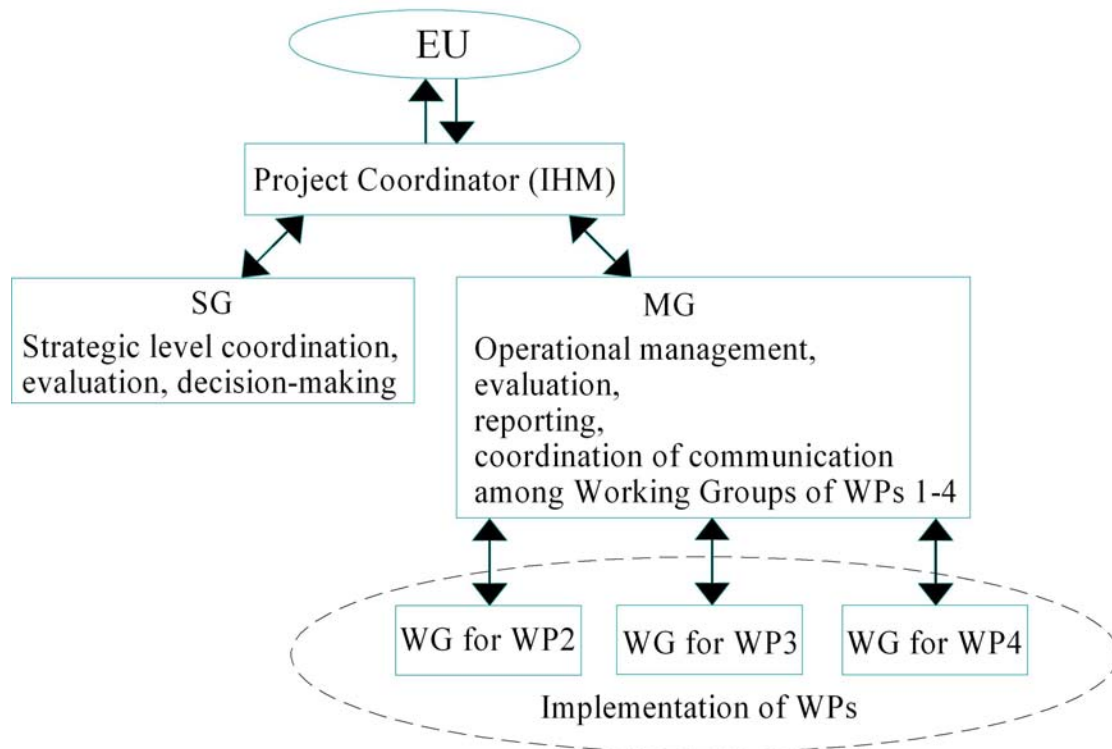
The Steering Group: it will be the main decision-making body of the project and will oversee entire project implementation. The Steering Group will also carry out strategic level coordination and decision making concerning execution of the project activities. The Steering Group has the power to make final decisions related to project issues. The SG will include representatives from the project partners and 2 external members. External members of the SG will be selected as well-recognized international S&T policy representing Ukraine and EU. The SG will select the chairman in its first meeting, organized in the framework of kick-off meeting. During the project lifetime the SG will meet face-to-face at least 3 times: kick-off meeting, midterm evaluation and final project faze. If necessary, the SG will meet more often in case of serious problems with the project implementation, unexpected political developments, etc. The purpose of SG is to make final decisions related to project issues. Besides that SG will organize meetings with important stakeholders both in Ukraine and Europe: Cabinet of Ministries, Academy of Sciences, Agency for Innovation, EIT, CLUSTER, EU bodies and Agencies, etc. The decisions of SG shall be made on the base of consensus; in case when consensus could not be reached voting will be used where each member has one vote. Partners will thus be guaranteed influence on the project development as well as overall strategic responsibility for the project. At the same the group members will exchange information and share their visions as well as communicate their opinions via electronic means on regular basis.

The Management Group: it will carry out daily work and the coordination of the inputs provided by the different partners, work packages and tasks. In order to guarantee a smooth coordination and management the Management Group will be composed by the leaders of WP2, WP3 and WP4, the project coordinator and the financial manager of the project. The Chairman of the Management Group will be elected by the group members. MG will meet face-to-face 3 times during the project implementation: at the project kick-off meeting, mid-term meeting and end of the project for finalization of the documents and preparation of the report. At the same time the members of MG will be in contact with each other using electronic means: telephone, e-mail, Skype and video-conferencing. Such approach will contribute to efficient management of the project and, at the same time, efficient use of the project funds.

For implementation of the activities in WP 2, 3 and 4 working groups will be appointed. Each WP will be led by a WP leader. WP leaders are responsible for organisation of the activities within the WP, production of the deliverables, communication with MG and SG and reporting of activities of their WP to the lead partner. Upon completion of each activity within the WP a report together with the deliverables is to be submitted to the project coordinator. Besides that, report on current stage of WP implementation together with financial statement is to be prepared and submitted to the coordinator and financial manager respectively with the period of 6 months. Also, all partners have to report their individual activities and use of project finances to Lead Partner each six months.

The organisational structure of the project is shown on the following scheme:

ERAIHM Management Scheme



Based on this information, the lead partner will compile the summary reports of activities and finances and is responsible for the submission of the periodical reports to the EC.

The project MG will prepare the mid-term meeting and project finalization meeting. For this meetings leader of each WP will present current situation, achievements of the WG, deliverables and financial statements. The project coordinator and the project financial manager will give general presentation on entire project and the project budget.

B 2.2 Beneficiaries

Partner 1:

Institute of Hydromechanics of the National Academy of Sciences of Ukraine (IHM NASU) was founded in 1926 and is currently the largest center for research of a wide range of problems in modern fluid mechanics.

The total number of IHM staff is more than 250 people, including 27 full professors (doctors of sciences).

12 scientific departments of IHM cover the research in all directions of modern hydromechanics, including:

- Study of the characteristics of fluid flows in channels considering phase transitions;
- Development of methods for flows control in the boundary layer for drag reduction to the motion of bodies in the fluid.
- Development of methods for direct numerical simulation of fluid flows.
- Study of sound generation by flow and development of methods for monitoring the efficiency of conversion of kinetic energy flux into the energy of sound.
- Study of the interaction of surface waves with the shore and engineering structures in the coastal zone.

IHM has a developed infrastructure of experimental tools, which is recognized as Ukrainian national heritage.

The design engineering bureau of IHM provides experimental investigations and development special measuring tools.

Based on results of basic research IHM performs wide range of applied investigations in the areas included in such thematic priorities of Fp7 as energy, environment, transport and biotechnology. In 2007 the IHM started up a Joint Ukrainian - Swedish Research Laboratory on Sustainable Energy and Environmental Technologies in cooperation with Royal Institute of Technology (KTH, Sweden) and National Technical University of Ukraine "Kiev Polytechnic Institute".

IHM is a major training center in Ukraine in the field of fluid mechanics and acoustics. The Institute carries out training of Doctors of Sciences and PhD students in cooperation with leading technical universities in Ukraine, including National Technical University of Ukraine "Kiev Polytechnic Institute", National Aviation University, East-Ukrainian Technical University (Luhansk), Technical University (Poltava).

For more than 10 years Institute publishes two journals: "Applied Fluid Mechanics" and "Acoustic Vestnik". Both of them are being translated and published in USA.

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The institute is contracted to conduct research with research centers in the USA (Cortana CORPORATION, University of Illinois at Urbana-Champaign, Washington University in St. Louis), Sweden (Royal Institute of Technology, Royal Academy of Sciences), The Netherlands (TU Delft, Eindhoven University of Technology), France (Toulon University, Systems Navals Complexes Laboratory), Germany (DLR, Gottingen), China (China Ship Scientific Research Center, Wuxi city; Technical University, Harbin city) , Republic of Korea (Pusan National University, Advanced Ship Engineering Research Center).

Prof. Victor T. Grinchenko – Professor, Member of National Academy of Sciences of Ukraine (NASU), Director of Institute of Hydromechanics. The main research areas are Hydrodynamic Acoustics, Control of Elastic-Fluid interaction, Control of Noise Pollution of Urban Atmosphere. He is a Head of Joint Research and Education Department of NASU and National technical university. He is Editor in Chief of International Journal of Fluid Mechanics Research (Begell House, Inc., USA) , Applied Hydromechanics and Acoustical Bulletin (NASU, in Russian). He is a member of Acoustical Society of America and IEEE. He is author/co-author of more than 200 scientific publications including 10 books in areas of acoustics, elastic - fluid interaction, mechanics of elastics bodies.

Prof. Eugene I. Nikiforovich - Professor, Corresponding Member of National Academy of Sciences of Ukraine (NASU), Head of Department of Institute of Hydromechanics of NASU. The main research areas are physical-chemical Hydrodynamics and vorticity dynamics with available body forces and transport mechanisms in continuous media under hydro-thermo dynamical nonequilibrium. Member of Editorial Board of "Hydromechanics" Journal edited in Kiev and U.S., member of the Commission of Russian Academy of Sciences on World Ocean Problems. Member of the Higher Benchmark Commission of Ukraine. Author/co-author of more than hundred of scientific publication including 3 books in area of fluid mechanics.

Partner 2:

Kungliga Tekniska Högskolan (KTH) – is the largest technical university in Sweden. KTH is actively executing major EU cooperation programmes such as FP7, Lifelong Learning, Tempus, Erasmus-Mundus, Asia-Link and Leonardo da Vinci. Several national and international competence centres and networks of excellence are located at KTH. KTH is participating in 60 FP7 research projects and coordinating 10 of them.

KTH is involved as a leading party in two of three new Knowledge and Innovation Communities (KIC) created within European Institute of Innovation and Technology (EIT) aiming at a more in-depth integration of research, education and innovation. The purpose is to increase the EU countries' global competitiveness through the development of more innovative products for the world market in strategically important areas. KTH is playing a leading role in the consortiums "EIT ICT Labs" and "KIC InnoEnergy", selected in tough competition by EIT's board in December 2009. Within the consortia, there are research institutes, major engineering companies and several leading technical universities in Europe.

The Secretariat for The CLUSTER network (Consortium Linking Universities of Science and Technology for Education and Research), uniting 12 European universities committed to

enhancing top quality in science and engineering education and research is located at KTH. KTH is also active partner in several other networks like CESAER, T.I.M.E. (Top Industrial Managers for Europe), GE4 (Global Education for European Engineers and Entrepreneurs), Magelhães - SMILE network linking South American universities to European counterparts. KTH has since 2005 a signed agreement with the Chinese Scholarship Council to receive 70 researchers annually at postgraduate level.

The Department of Industrial Ecology will lead capacity building activities within ERAIHM project. The Department is active in research for sustainable technology development with the focus on the relationship between technology, lifestyles and sustainable development. The research topics at the Department are: development of tools for sustainable development of consumption and the involvement of stakeholders in this process (ToolSUST); identifying goals and models for sustainable urbanism; sustainability assessment of technologies and technology chains; Integrated Coastal Zone Management including methods for conflict resolution. The Department of Industrial Ecology is working in close cooperation with the city of Stockholm as well as several municipalities in Sweden in projects for developing models for sustainable residential areas. The Department coordinates an EU project for creating visions and scenarios for climate neutral cities within the UrbanNET program. The Department has close cooperation with IHM NASU.

Prof. Ronald Wennersten – Professor, Head of the Industrial Ecology Department at KTH. The main research areas are Industrial Ecology, Risk Management and Sustainable Urban Development. He is a Head of Joint Research Center for Industrial Ecology, Shandong University, China. He is a member of editorial boards for International Journal of Climate Change Strategies and Management; International Journal of Sustainability in Higher Education; Journal of Strategic Management; International Journal on Performability Engineering. He has been a coordinator of International Society for Industrial Ecology Conference in 2005. He is an initiator of UrbanNET – a network of European researchers working to create scientifically based strategies for creating visions for urban areas connected to climate change.

Dr. Olga Kordas – Senior Researcher at the Industrial Ecology Department, KTH. She has obtained the PhD in Complex System Simulation in 1997. The main research areas are scenario methods and interactive . She coordinates international research and education projects in the area of Sustainable Development and Industrial Ecology, including Interreg IIIB COASTMAN Project, Erasmus-Mundus Action 4 SDPROMO I and II projects as well as national projects financed by the Swedish Royal Academy of Science, Swedish Institute and SIDA. She is a Swedish coordinator of the Joint Laboratory on Energy and Environmental Technology (Ukraine) created in cooperation with the Institute of Hydromechanics NASU and National Technical University of Ukraine “Kiev Polytechnic Institute”.

Partner 3:

Technische Universiteit Delft (TU Delft, The Netherlands) is the oldest and largest technical university in the Netherlands. It encompasses all engineering specialties. TU Delft cooperates internationally in the IDEA league, consisting of Imperial College London, ETH Zurich, RWTH Aachen and Paris Tech. TU Delft is an active participant of national and international research and development programs including FP7.

As part of Delft University of Technology, the Faculty of Technology, Policy and Management (TPM) strives to make a significant contribution to sustainable solutions for social problems in which technology plays an important role, through internationally oriented education and research. TPM aims at opening new perspectives by achieving a unique co-operative relationship between the arts/social sciences and the exact sciences/technology.

TPM employs 217 scientists and 45 support staff. Its organization consists of 14 scientific units. The section of Technology Dynamics and Sustainable Development researches and teaches in the fields of Technology Assessment, Technology Dynamics, Innovation and History of Technology focusing on sustainable (technological) developments.

The section conducts research into long-term technological change processes and their relationship to society. The starting point is the co-evolution of technology and society, which means that technological change processes are inextricably linked with processes in society and that technology is embedded in culture and social structures. A major focus of the section's research and education programmes is Sustainable Technology Development. The section often

works in partnership with technical faculties or with other sections within the Faculty of Technology, Policy & Management. Research focuses on the following major themes:

- Long-term technological change processes and system innovations.
- The interaction of technology with societal developments.
- Steering technological innovation processes towards sustainability.

The research is characterized by analysis of technology development processes and socio-technical systems (technology dynamics), research into societal steering of technological developments (participative methods, experiments), preconditions and opportunities for sustainable technology development and methods for Technology Assessment and Innovation towards Sustainability. The scientific objective of the section is to develop knowledge, instruments and methods which facilitate/improve the steering of technological innovation. There are three interrelated research areas, which can also be seen as a single coherent theme:

- Determinants for Technological Transitions and System Innovations towards Sustainability
- Interactive Steering in Technological Change Processes
- Tools and methods for Technology Assessment and Innovation for Sustainability

TPM and its sections are actively working on cooperation with stakeholders in society. It established a research Center for Port Innovation and Regional Development with an aim to generate, coordinate and implement innovative and sustainable initiatives that are of importance to the port of Rotterdam, regional enterprises and authorities, and Delft University of Technology.

Dr. Karel Mulder - Associate professor, Head of research unit of Technology Dynamics and Sustainable Development. Studied Physics, Philosophy and Business Administration and has a PhD on corporate decision making on R&D projects (University of Groningen, 1992). In 1994, he founded the Technology and Society department of the Netherlands Royal Institute of Engineers and served as its first president. Since 1998 Dr Mulder has been project leader of the Education for Sustainable Development project. He was the initiator of the series of Engineering Education in Sustainable Development Conferences that took place biannually from 2002. He has more than 50 publications on societal impact of new materials, public perception of nuclear power, sustainability education, and sustainability & innovation.

Dr. J.N. Quist – Assistant Professor at the Department of Technology Dynamics and Sustainable Development. He holds a PhD from Delft University of Technology (DUT) in Technology, Policy and Management. He works on backcasting and other foresighting approaches for sustainability, as well as on system innovations towards sustainability. His research concerns (system) innovations towards sustainability, how to initiate and manage these in a multi-actor context, constructive technology assessment, stakeholder workshops and scenario studies.

B 2.3 Consortium as a whole

The project consortium involves 3 institutions: Institute of Hydromechanics of National Academy of Sciences of Ukraine (IHM, 1), Royal Institute of Technology (KTH, 2) and Technical University Delft (TU Delft, 3). All 3 partners are among leaders in their respective countries (Ukraine, Sweden, and Netherlands) in the area of research and innovation.

All project partners have experience of working together and have successfully implemented several joint projects. IHM and KTH started their cooperation several years ago and in 2007 this joint work resulted in establishing at IHM a Joint Ukrainian - Swedish Research Laboratory on Sustainable Energy and Environmental Technologies in cooperation with Royal Institute of Technology (KTH, Sweden) and National Technical University of Ukraine “Kiev Polytechnic Institute”. In this way the partners confirmed mutual recognition of the work being done and clearly showed intentions for long-term cooperation in the area of sustainable energy and environmental technologies.

All together IHM, KTH and TU Delft were involved in the project “Bridging the gap between academia and business” funded by the EU.

IHM NASU is the main beneficiary of the project and its staff will be the main workforce of the project, it will be actively involved in the working groups of all work packages. IHM will also coordinate the project and organise main project events. Being an active participant in multi

beneficiary research and development project, IHM have all necessary capacities for fulfilling these tasks.

Two other partner institutions – KTH and TU Delft are among leading research institutions in Europe and have skilled and competent staff required for the project implementation. In the project TU Delft is represented by the Faculty of Technology, Policy and Management (TPM). For the project it will contribute with experience of its staff in three interrelated research areas, which can also be seen as a single coherent theme:

- Determinants for Technological Transitions and System Innovations towards Sustainability
- Interactive Steering in Technological Change Processes
- Tools and methods for Technology Assessment and Innovation for Sustainability

Main intervention from TU Delft will be done in overview of Ukrainian innovation system and identifying competitive advantage within WP2 and in interactive backcasting exercise in WP3. TU Delft will commit necessary human resources for this work as well as provide all other required support.

KTH subsequently will largely contribute to international evaluation of research scope and quality at IHM (WP2), identifying capacity gaps and training needs at IHM, development and implementation of training modules. KTH will contribute with knowledge, skills and experience of its staff gained during Research Assessment Exercise carried out at KTH in 2008.

Both KTH and TU Delft will be equally involved in development of IHM strategy for RTD and Innovation.

To support visibility of IHM and its networking the European partners will present IHM research potential and cooperation possibilities during the events organised in the framework of networks where they are involved, including Nordic 5, CLUSTER and EIT KIC InnoEnergy (KTH) and IDEA League (TU Delft)

All project partners will be deeply involved in the project implementation, will complement each other in executing tasks within the project work packages; i.e. this project will be a real joint effort of all project partners.

Sub-contracting:

The project team will use subcontracting for tasks outside competence of the project partners:

- WP4, Task 2: Design of the web-platform for IHM. While the maintenance of website will be carried out by the qualified staff of IHM, design and development of software is out of competences of IHM. Similar approach is also used by the EU partners involved in the project: they outsource design and development of webplatforms to professional ICT companies. The allocated budget is 7000 EUR.

- Though the working language of the project is English, the external translation services are needed for the events with participation of Ukrainian stakeholders and language check of publications. As neither of the project partners has English as the native language, all of them outsource translation and language check to professional companies. Translation of the events (current rates: 550 EUR/day translation fee+250 EUR/day rent of equipment): WP4, Task 5 - International symposium on innovation support system in Ukraine and Ukrainian competitive advantage; Task 6 - Workshop for presenting the experience of interactive backcasting exercise conducted within the project; Task 7 - Final project conference; WP3, Task 3 - Implementing Interactive Backcasting Exercise (workshops with stakeholders – 6 days). The allocated budget is 14100 EUR.

B 2.4 Resources to be committed

The project budget summarizes resources to be committed to implementation of the project. For production of all project deliverables the staff from project partners will contribute with 124 man/months of their working time. While calculating staff expenses we used the recommendations from the EC given in Guidelines for applicants. The staff expenses will be distributed among partners in following way:

Name of Institutions	Man/months	Cost in Euro
IHM	98	80033
KTH	14	78934
Delft	12	67657
Total		226624

Travel and subsistence costs related to the project are distributed among the partners in following way:

IHM mobility to:		KTH mobility to:		TU Delft mobility to:	
KTH	TU Delft	IHM	TU Delft	IHM	KTH
€13500	€9000	€16600	€2857	10500	1429
€22500		€19457		€11929	
Total					53886

For the daily and accommodation allowances Partners No1 (IHM NASU) and No2 (KTH) are using flat rate method, partner No3 (TU Delft) is using real costs method.

This project does not imply purchase of big volume of equipment, though we are planning to acquire following items:

Partner	Specification	Cost
IHM	2 Laptops, 1 projector, books, reports	€4800
KTH	1 Laptop, books, reports	€2100
TU Delft	1 Laptop, books, reports	€2100
Total		€9000

Other costs for the project will include:

- costs related to the events organized in Ukraine, Sweden and Netherlands (event materials, local transportation for study visits, rent of equipment, refreshments);
- printing and publishing costs;
- travel costs and fees for 9 external speakers of dissemination events (Task 5 - International symposium on innovation support system in Ukraine and Ukrainian competitive advantage; Task 6 - Workshop for presenting the experience of interactive backcasting exercise conducted within the project; Task 7 - Final project conference) and for 4 external speakers presenting best practices and show-cases on participation of Ukrainian Research Centres in European Framework Programmes;
- Travel costs and fees for 3 External Peer Reviewers (Wp2, Task1) and travel costs for 2 external peer reviewers. Reviewers will be treated as in-house consultants and the cost occurred will be considered as personnel cost in line with the provisions of the Grant Agreement.

Partner	Specification	Cost
IHM	Kick-off meeting, Final conference, Symposium, Workshop on backcasting, Training courses, stakeholders meetings	€12000
IHM	Printing and Publishing costs	€15000
IHM	Travel costs and fees for external speakers	€4680
KTH	2 workshops	€3809,5
KTH	Travel costs and fees for External Peer Reviewers	€12000
TU Delft	2 workshops	€3809,5
Total		€51299

Subcontracting: The project team is planning to use subcontracting for tasks outside competence of the project partners. The tasks are not the core parts of the project work, but auxiliary to the object of the project:

- WP4, Task 2: Design of the web-platform for IHM. While the maintenance of website will be carried out by the qualified staff of IHM, design and development of software is out of competences of IHM. Similar approach is also used by the EU partners involved in the project: they outsource design and development of webplatforms to professional ICT companies. The allocated budget is 7000 EUR.

- Though the working language of the project is English, the external translation services are needed for the events with participation of Ukrainian stakeholders and language check of publications. As neither of the project partners has English as the native language, all of them outsource translation and language check to professional companies. Translation of the events (current rates: 550 EUR/day translation fee+250 EUR/day rent of equipment): WP4, Task 5 - International symposium on innovation support system in Ukraine and Ukrainian competitive advantage; Task 6 - Workshop for presenting the experience of interactive backcasting exercise conducted within the project; Task 7 - Final project conference; WP3, Task 3 - Implementing Interactive Backcasting Exercise (workshops with stakeholders – 6 days). The allocated budget is 14100 EUR.

The Subcontracting costs are as following:

Design of the web-platform for IHM	€ 7000
Translation services	€ 14100
Total	€ 21100

B3. Impact

B 3.1 Strategic impact

The project will have the following impact on the Ukrainian scientific community:

1. The project will contribute to RTD capacity building in Ukraine through development and dissemination of example of a good practice in designing of a research center's strategy based on results of two assessments: firstly, evaluation of the center's research scope and quality and secondly, overview of Ukrainian Innovation System and assessment of competitive advantage of Ukraine in the sectors related to a Center's research areas. This is especially important as the research centres all over the world have a unique responsibility to take scientific advances forward into society, supporting existing companies as well as laying the foundations for emerging industrial sectors and enabling sustainable local and regional development. At a research centre, excellence in basic research must be matched by excellence in applied research and excellence in knowledge transfer, dissemination and exchange.

The project team will organise an international symposium on innovation support system in Ukraine and Ukrainian competitive advantage.

This event will bring together professionals in the field of innovation policy and experts in sustainable technology management from Ukraine and EU:

- National Academy of Sciences of Ukraine,
- Cabinet of Ministers of Ukraine,
- National Agency for Innovations,
- Ministry of Education and Science
- STCU

Furthermore representatives from leading Ukrainian industries, local and regional authorities will be invited.

During this event 2 project deliverables will be presented and discussed:

- Report on assessment of competitive advantage of Ukraine by sectors
- Recommendations on improvement of innovation support system in Ukraine.

2. The project will contribute to increased scope of the centres with increased linkage with economic and social environment through dissemination of the guideline on use of interactive backcasting method for stakeholders involvement in innovation process.

Research centers bear responsibility to disseminate their research results out into industry and society. Such responsibility must be carefully managed and include the awareness and understanding of technology's long-term effects. In the process of developing new technologies, many stakeholders play a role, representing various interests. In order to generate the resources that are required for a major technological change, it is important to develop a high degree of consensus among stakeholders, in an open and interactive process. Most of Ukrainian research centers have limited experience in stakeholders involvement into innovation processes and lack competences in using modern methods for facilitating sustainable innovations.

Interactive backcasting has been applied as a method that both creates consensus on future goals for technological development and guides the innovation process over time. The method was widely applied in the Dutch Sustainable Technology Development program where it became explicitly a tool for setting sustainable innovations in motion. Moreover, it emphasized the importance of interactions, as only in this way, stakeholders could develop the required commitment. It is showed that the effects of backcasting interventions could be made plausible, even after several years, which implied that the

method worked. The project team will develop and implement the interactive backcasting exercise at IHM NASU and disseminate its result during a dedicated workshop.

3. The project will enhance participation of the country in the 7th Framework Programme through development of training strategy and respective modules.

4. The project will also improve Networking methods of Ukrainian Research Centers with other research centres in Member States or Associated Countries.

B 3.2 Spreading excellence, exploiting results, disseminating knowledge

The project team is paying much attention to dissemination activities related to communication and networking with external stakeholders; dissemination of information on project content and deliverables; improvement of IHM visibility for Ukrainian and European research centres and stakeholders; networking for exchange of scientific information and design of joint RTD activities.

All dissemination activities will be carried out on the base of the communication and dissemination plan designed for efficient reach of various stakeholders both in Ukraine and EU countries. The plan for communication and dissemination will be developed and tuned to reach important target groups:

- European research centres and networks
- Research institutions in Ukraine
- Decision makers including National Academy of Sciences of Ukraine, Cabinet of Ministers of Ukraine, National Agency for Innovations, Ministry of Education and Science
- Industrial companies and public authorities
- National Information Centre for Ukraine-EC S&T cooperation
- Ukrainian Science and Technology Centre

Special attention will be given to use of Internet media for dissemination activities. For this purpose a web-platform of IHM for online communication with the stakeholders, distribution of information and marketing will be developed.

While developing the web-platform, existing web-presence of IHM will be reviewed followed with preparation of structure and concept of information delivery for the websites in Ukrainian and English. The websites will be built taking to consideration target groups for Ukrainian and English version as well as principle of consistency of information. The web-platform will be developed in a way that allows easy and smooth updating of information, light-weight graphics for easy access with wide range of Internet users.

The web platform will also incorporate tools for online communication and discussions during preparation of joint research project.

During the project lifetime variety of printed materials will be developed and produced for promotion and marketing purposes: leaflets for IHM (English and Ukrainian), project leaflet, and posters. These materials will be developed on the base of materials produced within WP2 and WP3 and distributed during the project events, meetings with the stakeholders, international mobility of IHM staff as well as during the events organised with the participation of EU partner institutions and through their networks.

IHM research potential and cooperation possibilities will be presented during the events organised in the framework of networks where European projects partners are involved:

- European Mechanics Society
- Nordic 5
- CLUSTER
- IDEA League
- EIT KIC InnoEnergy

In the framework of the project following main dissemination events will be organized:

International symposium on innovation support system in Ukraine and Ukrainian competitive advantage

This event will bring together professionals in the field of innovation policy and experts in sustainable technology management from Ukraine and EU:

- National Academy of Sciences of Ukraine,
- Cabinet of Ministers of Ukraine,
- National Agency for Innovations,
- Ministry of Education and Science
- STCU

Furthermore representatives from leading Ukrainian industries, local and regional authorities will be invited.

During this event 2 project deliverables will be presented and discussed:

- Report on assessment of competitive advantage of Ukraine by sectors
- Recommendations on improvement of innovation support system in Ukraine

We estimate the audience of this event on the level of 40 persons.

Workshop for presenting the experience of interactive backcasting exercise conducted within the project

The project team presents results of the interactive backcasting to decision makers and academic community in Ukraine for dissemination of acquired experience in use of this method for facilitation of involvement of various stakeholders in innovation process and linkage of Ukrainian RTD with social-economic needs of the society.

We estimate the audience to 80 persons.

Final project conference

The final project event will be organised in Ukraine for presentation of the project results, sharing experience gained by the WGs, and impact of the project on IHM NASU and Ukrainian academic community.

The event will target wide range of stakeholders:

- Representatives from Ukrainian and European research centres
- S&T international policy experts
- Decision makers
- Leading Ukrainian industrialists
- Public sector partners

During the conference the Ukrainian and European colleagues will get opportunity for further networking activities and planning for joint R&D projects. Expected audience is 120 persons.

All activities of the project will be covered in Ukrainian mass-media to disseminate the project outcomes to wide public. Representatives from media companies will be invited to the project events, press-releases will be distributed among local journals and newspapers. In framework of the events press-conferences will be organised with participation of Ukrainian and EU representatives as well as interviews with the VIP guests and keynote speakers.