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AComIn: Advanced Computing for Innovation

**FP7 Capacity Programme
Research Potential of Convergence Regions**

WP6: Assessment of IICT by Independent International Reviewers

D6.1 Evaluation Criteria and Input Materials for the Final Evaluation

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EXECUTIVE SUMMARY

The Work Package WP6 organises evaluation of the Institute of Information and Communication Technologies (IICT) of Bulgarian Academy of Sciences in order to assign a 'quality label' to the research performance, human potential, infrastructure, administrative and management capacity of IICT. This Evaluation Facility is foreseen in AComIn with the aim to promote IICT as an excellent regional unit with capacity to perform high-quality RTD activities in large EU research projects, infrastructures and clusters with ICT components. The evaluation will be performed by four EC-selected Reviewers: Prof. Virginio Cantoni from Pavia University, D.Sc. Marcin Paprzycki from the Polish Academy of Sciences, Dr. Cristina Vertan from Hamburg University and Dr. Dirk Philips from Htx services bvba, Belgium.

Task 6.1 in WP6 deals with the justification of evaluation criteria and input materials to be prepared for the assessment. Deliverable D6.1 presents:

- agreed evaluation criteria (discussed by the independent reviewers, AComIn coordinator and IICT leadership during a meeting held in Sofia on 28-30 January 2016) and
- lists of input materials for the evaluation, including AComIn deliverables with public and restricted access, the AComIn project site with all its content as well as additional documents that summarise various aspects of IICT organisational and management structure and capacity.

The evaluation criteria focus on Human resources, Equipment, Research results, Connectivity of IICT, Project execution organisation including management capacity as well as Sustainability issues. It was also decided that the review process will include the AComIn SWOT analysis presented in the Technical Annex of the project in 2012 (which axes have been improved, remaining points to be tackled in the future) as well as Strategic recommendations and action plan for performing future RTD-related activities.

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Summary	Deliverable D6.1 defines the Evaluation criteria to be used in WP6 of AComIn in order to accomplish the task "Final evaluation of the research capacity and potential of the institute IICT based on, but not limited to, the results of the REGPOT-1 project AComIn FP7 grant 316087". The deliverable also lists the input materials for the review – most of them are AComIn deliverables but there are further documents to be prepared by IICT by the end of February 2016.	
Keywords	Assessment, human resources, equipment, results, research capacity, management structure, connectivity, sustainability, recommendations	
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TABLE OF CONTENTS

EXECUTIVE SUMMARY	2
TABLE OF CONTENTS	4
1. REVIEW TASK DESCRIPTION	6
2. INPUT MATERIAL	6
2.1. AComIn Technical Annex - Description of Work, version 20 August 2012.....	6
2.2. Project documents as published on AComin website (including team area).....	6
Public Deliverables.....	6
<i>Month 36 (September 2015)</i>	6
<i>Month 24 (September 2014)</i>	6
<i>Month 18 (March 2014):</i>	7
<i>Further Materials:</i>	7
Deliverables with Restricted Dissemination.....	7
<i>Documents with Restricted Dissemination</i>	7
<i>Reports with Restricted Dissemination</i>	7
<i>Milestones and sample applications</i>	8
2.3. Visit to IICT.....	8
2.4. Additional documents to be prepared by IICT	9
3. LIST OF EVALUATION CRITERIA	9
3.1. Human resources (§5.2.1 Strategic Priority 1 of DoW Action Plan: Strengthening Human Potential).....	9
<i>Scientific competences</i>	9
<i>Evolution of number of people</i>	9
3.2. Equipment (§5.2.2 Strategic Priority 2 of DoW Action Plan: Providing up-to-date Research Infrastructure).....	9
<i>Acquired during the AComIn project</i>	9
<i>Other related equipment</i>	9
3.3. Results	9
<i>Research in AComIn areas</i>	9
<i>Publications</i>	10
3.4. Connectivity of the organisation (§5.2.3 Strategic Priority 3 of DoW Action Plan: Strengthening IICT Innovation Capacity).....	10
<i>With other research entities in the region and in the country</i>	10
<i>Internationally, including joint projects</i>	10
<i>Connections and partnerships with regional stakeholders</i>	10
<i>Communication and Society (§5.2.4 Strategic Priority 3 of DoW Action Plan: Endorsing the 'Science-in-Society' principles)</i>	10
<i>Gaps</i>	10

3.5. Project Execution Organisation.....	11
<i>Organisation of competences in viable research groups (§5.2.4 Strategic Priority 3 of DoW Action Plan: Strengthening IICT Innovation Capacity)</i>	11
<i>Management structure</i>	11
<i>Project control and administration (§5.2.5 Strategic Priority 5 of DoW Action Plan: Organising regular assessment of the IICT achievements)</i>	11
3.6. Sustainability	11
<i>Short-medium term sustainability</i>	11
<i>Long term sustainability</i>	11
4. OTHER ACTIONS	12
4.1. Review of AComIn DoW SWOT analysis	12
<i>Determine which axes have been improved</i>	12
<i>Remaining weak points to be tackled in near future – Action plan</i>	12
4.2. Strategic recommendations and action plan for future research	12
<i>Sustainability</i>	12
<i>Innovation strategies</i>	12
<i>Market trends</i>	12
APPENDIX	13
Performance Indicators of AComIn (page 50, DoW)	13
SWOT analysis (Pages 45-48 of DoW)	14
Strategic Priority 1: Strengthening Human Potential	16
Strategic Priority 2: Providing up-to-date Research Infrastructure	16
Strategic Priority 3: Strengthening IICT Innovation Capacity.....	16
Strategic Priority 4: Endorsing the 'Science-in-Society' principles.....	17
Strategic Priority 5: Organising regular assessment of the IICT achievements	17

1. REVIEW TASK DESCRIPTION

The task of final evaluation of the research capacity and potential of the coordinator's organisation will be based on, but will NOT be limited in its scope to, the results of the REGPOT-1 project AComIn "Advanced Computing for Innovation" FP7 grant 316087. The coordinator's organisation is the Institute of Information and Communication Technologies, Bulgarian Academy of Sciences (IICT).

Specifically, this is not going to be a limited in scope evaluation of the work carried out by the project. Instead it will aim at assisting the coordinator's institute to take the right directions in the future, to assure its sustainability in line with innovation strategies and current (and foreseen) market trends.

The final delivery of work package WP6 will be an overall assessment of the research quality and capability, delivered after the AComin project completion.

2. INPUT MATERIAL

This section contains a list of documents that are going to be considered during the above mentioned evaluation process. For each document group, its source has been specified.

2.1. AComIn Technical Annex - Description of Work, version 20 August 2012

2.2. Project documents as published on AComin website (including team area)

Public Deliverables

Month 36 (September 2015)

- D1.2 Strengthening the IICT Human Potential
- D2.4 Building User Communities
- D2.5 Final Exploitation Plan of SmartLab and the AComIn foreground
- D3.2 Networking
- D4.3 Final Report on Innovation Capacity Building Activities
- D5.2 Dissemination Activities
- D5.3 International Conference "Advanced Computing for Innovation"
- D5.4 AComIn Awareness Raising and Wider Societal Impact
- D7.7 Input for EC Review
- D7.8 Steering Committee Conclusions Regarding Year 3

Month 24 (September 2014)

- D7.6 Strategy for Sustainable Development of the Institute of Information and Communication Technologies

Month 18 (March 2014):

- D1.1 Strengthening the IICT Human Potential
- D2.2 Infrastructure Upgrade and Integration
- D2.3 Building User Communities
- D3.1 Networking
- D4.2 Innovation Capacity Building Activities
- D5.1 Dissemination Activities
- D7.4 Input for EC Review in month 18

Further Materials:

- Movies about AComIn (*People, Smart Lab, Results and Users*)
- Newsletters
- Awards, media reflections as shown at the project site

Deliverables with Restricted Dissemination

- D2.1 Smart Lab tender and delivery of devices (m12)
- D4.1 Suggestions for tuning the IICT Innovation Strategy and IP Policy to the best EU practices (m12)
- D7.1 Detailed Implementation Plan (m2)
- D7.2 Project Handbook (m3)
- D7.3 Steering Committee Conclusions regarding year 1 (m12)
- D7.5 Steering Committee Conclusions regarding AComIn Performance Year 2 (m24)
- D7.8 Steering Committee Conclusions Regarding AComIn Performance Year 3
- Year 1 Report (m12)
- First Periodic Report (Month 18)
- Project Progress Report Period 1 (Month 18)
- Year 2 Report (m24)
- Project Progress Report Period 2 (Month 36)
- Second Periodic Report (Month 36)
- Report national co-financing contract DO1-192 (in Bulgarian)

Documents with Restricted Dissemination

- Regulations for ACOMIN mobility / Правила за реализиране на командировки по проект АКОМИН
- Monitoring of travels / Таблица за мониторинг на пътуванията
- PPT-presentation template / Шаблон на ppt-презентации по АКОМИН
- Event planning template / Заявка за планиране на мероприятие
- Event report template / Отчет за проведено мероприятие
- List of reporting documents / Списък документи за отчитане на пътувания
- AComIn Deliverable template / Шаблон за отчет по АКОМИН
- Periodic or Final WP Report / Междинен или заключителен отчет по Работен пакет

Reports with Restricted Dissemination

- WP1: Presentations and Reports of Incoming experienced researchers
- Long-term employments of post-docs
 - Short employments of experienced researchers

WP2: Building User communities – list of participants in technology transfer events

WP3: Mobility reports

- Incoming short visits
- Outgoing short visits
- Secondments
- Participation in scientific events
- Participation in information events

WP4: Innovation potential development – event presentations, patents, certificates

WP5: Dissemination activities – list of participants, photos

WP6: Assessment of IICT by independent reviewers

- Presentations about AComIn and IICT, 28 January 2016

WP7: Public Procurement Procedures related to AComIn activities

Milestones and sample applications

- WT2: List of Deliverables
- WT4: List of Milestones
- Smart Lab Applications

2.3. Visit to IICT

The experts performing the ex-post evaluation measure foreseen in the AComIn project, called here Reviewers, were identified in the Commission Expert Database by the EC Project Coordinator Dr. Olivier Brunet. Keywords related to the AComIn topics were used in the search: *large scale scientific computing, FEM simulations, Monte Carlo simulations, computational mechanics, computational electronics, language and speech processing, signal and image processing, digitisation, 3D experimentation, 3D prototyping, and ICT-driven innovation.*

When selecting experts with complementary scientific expertise for the Reviewing team, Prof. Virginio Cantoni from Pavia University was chosen as a project partner, who knows the AComIn team from the very beginning. D.Sc. Marcin Paprzycki from the Polish Academy of Sciences and Dr. Cristina Vertan (originally with Romanian nationality, working in Hamburg University) are experienced researchers who have good knowledge about the situation in Eastern Europe. Dr. Dirk Philips brings in the “commercial” vision of Western Europe.

The initial Meeting of Reviewers and the AComIn team was held on 28-30 January 2016 in Sofia. This event was planned as a meeting venue of the Reviewers, the AComIn Steering Committee members and the IICT project team. It consisted of sessions devoted to:

- Presentation of AComIn project and the Institute IICT,
- Presentation of AComIn researchers,
- Demonstrations of equipment,
- Presentation of the project results,
- Discussions on all levels including with members of the AComIn Steering Committee and project partners.

2.4. Additional documents to be prepared by IICT

Upon completion of the initial visit to the Institute, the following list of additional documents, to be prepared and delivered to the team of Reviewers has been formulated. These documents are to be delivered as soon as they are available, but not later than on February 26, 2016:

- Schematic presentation of the evolution of the number of IICT research staff
- Organisational structure of IICT
- Information about the administrative capacity of IICT
- Information about IICT connectivity
- Overview of IICT projects with external funding for 2011-2015
- Update of AComIn results and publications by 31.01.2016 (given WP1-WP5 extension)
- Summary of changes in the AComIn thematic foci as selected in 2011
- Scenarios for the future
- Information about the IICT Technology Transfer Office in Energy Efficiency: Goals, Achievements

3. LIST OF EVALUATION CRITERIA

As a result of discussions that took place during the initial visit, taking into account:

- (i) the task to be undertaken,
- (ii) the nature of the project under consideration,
- (iii) content of WP6,
- (iv) guidelines from the EU Officers overseeing the project, and
- (v) knowledge and experience of all four Reviewers,

the following list of criteria that are going to be used in the evaluation process has been agreed to. Each criterion to be evaluated has been further elaborated by providing the list of specific sub-criteria that will be taken into consideration. These criteria constitute the core of the deliverable D6.1, as specified in WP6, Task 6.1.

3.1. Human resources (§5.2.1 Strategic Priority 1 of DoW Action Plan: Strengthening Human Potential)

Scientific competences

Evolution of number of people

3.2. Equipment (§5.2.2 Strategic Priority 2 of DoW Action Plan: Providing up-to-date Research Infrastructure)

Acquired during the AComIn project

Other related equipment

3.3. Results

Research in AComIn areas

Semantics, language and speech processing

- Automatic processing of image annotations in large-scale image databases;

- Application of Educational Data Mining for Analysis of the eLearning portal UCHA.SE;
- News Media Analysis and Creation of Language Resources;
- Language Technologies Applied for Generation of a Diabetes Register;
- Speech processing with focus on Bulgarian speech;

3D and video processing

- Advanced methods, algorithms and innovations based on 3D digitisation and prototyping;
- Biometric Authentication through Ear Biometrics, Speech detection and Signature verification;
- Results in Video Stabilisation;
- Applications to Digital Humanities. This is a newly emerged research direction which was not foreseen at the beginning of the project;

Materials and testing

- Neuro-fuzzy approach for visualisation of 3D acoustic waves propagation;
- Enhancement of acoustic noise source localization and identification;
- Development of a new type of chemical nickel coatings including nano elements;
- Intelligent methods for technical diagnostics;
- Target detection and parameter estimation;
- Mechatronic systems for industrial automation and robotics;

Supercomputing and transport related

- Wigner Monte Carlo algorithms for quantum transport in nanoelectronics;
- Robust finite element methods and algorithms for advanced computer simulations;
- Advanced computing in dynamical analysis of elastic structures;
- Traffic optimization in communication networks;
- Intelligent Transportation Systems;
- Numerically Effective Kalman Estimator Algorithm for Urban Transportation Network

Publications

- using the bibliometrics and other methods
- other publications such as patents, monographs ...
- non published project advances e.g. with companies

3.4. Connectivity of the organisation (§5.2.3 Strategic Priority 3 of DoW Action Plan: Strengthening IICT Innovation Capacity)

With other research entities in the region and in the country

Internationally, including joint projects

Connections and partnerships with regional stakeholders

Communication and Society (§5.2.4 Strategic Priority 3 of DoW Action Plan: Endorsing the 'Science-in-Society' principles)

Gaps

3.5. Project Execution Organisation

Organisation of competences in viable research groups (§5.2.4 Strategic Priority 3 of DoW Action Plan: Strengthening IICT Innovation Capacity)

Management structure

Project control and administration (§5.2.5 Strategic Priority 5 of DoW Action Plan: Organising regular assessment of the IICT achievements)

3.6. Sustainability

Short-medium term sustainability

- **Human resources** – based on indicators referring to IICT staff capacity, including numbers of PhDs and Postdocs that remain at IICT after AComIn's end; number of PhD candidates approved in 2015 who start their PhD studies; number of PhD candidates who come from industrial settings or from abroad – who pay for their research training;
- **Equipment** – Institute's ability to support the SmartLab devices, to ensure their maintenance and relevant software updates;
- **Collaboration with academic partners** – keeping contacts with AComIn partners and researchers, especially with those incoming scientists who leave Bulgaria. Number of internal thematic networks that are still running after AComIn's end. Number of new contacts with leading international academic players that were created via AComIn;
- **Funding stability and collaboration with industry** – how many immediate follow-up projects with industry and clients from the public sector are expected after AComIn; assessment whether the Institute's activity is funded through a variety of sources combining stable and flexible funding; membership of the Institute in clusters where industrial stakeholders are involved.

Long term sustainability

- **Human resources** – number of experienced AComIn researchers who remain in IICT to maintain their research groups as strong leaders with ability to attract resources; ability of IICT seniors to adapt to new research areas;
- **Equipment** – well-motivated plans to extend the IICT infrastructure;
- **Partnership** – contacts of the Institute with strong international partners with ability to initiate joint projects and help building liaisons to international high-tech industry; involvement of Community leaders in collaborations with IICT; successful regional partnerships in the neighboring countries; close IICT cooperation with relevant national stakeholders;
- **Strategic planning and support of innovation** – availability of relevant regulatory documents that ensure long term sustainability; to which extent IICT can organise self-evaluations; how IP protection and collaborations with industry are implemented;
- **Visibility** – how IICT exposes its scientific result to the attention of key industry players and academic circles; how the Institute demonstrates its value to the society.

4. OTHER ACTIONS

It was also decided that the following actions will be undertaken as a part of the review process.

4.1. Review of AComIn DoW SWOT analysis

Reference § p45 in DOW AComIn (316087) 2012-08-20

Determine which axes have been improved

Remaining weak points to be tackled in near future – Action plan

4.2. Strategic recommendations and action plan for future research

Sustainability

Innovation strategies

Market trends

APPENDIX

Please note that this information has been copied from selected AComIn project documentation and concerns the main resource for the WP6 evaluation.

Performance Indicators of AComIn (page 50, DoW)

The project performance will be considered in terms of:

- **Research productivity**: the number and quality of scientific publications will be increased by 10%, given that IICT has produced in 2011:
 - ✓ 343 papers (51,3% of them refereed in some of the worldwide indexing bases; 60,8% of all refereed papers or 31,2% of all papers have IF /Web of Science/ or SJR impact rank /SCOPUS/; 19,5% of all papers have a foreign co-author);
 - ✓ 14 monographs and edited volumes as well as 4 university textbooks;
 - ✓ 344 citations of 189 papers authored by IICT researchers; 83,2% of the citations are done by authors working abroad.
- **Relevance to the socio-economic needs**: the number of contacts with industrial, governmental and NGO users and clients will be increased by 15% via contracts, established during **AComIn**. The number of joint development initiatives will be increased by at least 8-10 new initiatives starting within **AComIn**. As a baseline the number of IICT applied projects and contracts in 2011 will be used: 5 projects, funded by the Bulgarian SMEs Promotion Agency and 10 contracts for industrial research, funded by Bulgarian companies.
- **Human Resources**: the number of recruited foreign incoming researchers will be increased by 4 and the number of repatriated Bulgarian researchers by 3 (according to the positions planned for long-term employment). The number of new project-based staff attracted in projects initiated as a consequence of the **AComIn** activities will be increased by at least 20 researchers (in 2011 it is 47 researchers). The number of defended PhD theses will be increased by at least 20% (in 2011 3 PhD theses were defended in IICT). Participation in scientific events abroad will be increased by 15% (in 2011, the IICT scientists had 196 participations in conferences in 35 countries). Visits of foreign researchers will be increased by 20% (in 2011, 62 scientists from 14 countries have visited IICT for joint work in various projects).
- **Innovation impact**: The number of patent applications, submitted within **AComIn**, will be at least 4. The software licenses will be at least 3. The User Communities will comprise hundreds of industrial experts. There will be several awards for IICT results at exhibitions, industrial fairs, and innovation-related forums (having in mind the present IICT achievements).
- **Social impact**: There will be hundreds of visitors at the Doors Open Days and attendees at the Information Days and Stakeholders meetings. There will be dozens of media reactions to the **AComIn** dissemination efforts.

SWOT analysis (Pages 45-48 of DoW)

We acknowledge the first *International Evaluation* of the Bulgarian Academy of Sciences which was a self-initiated and pioneering initiative, performed by the European Science Foundation/ALLEA (no Bulgarian university organised such an extensive procedure yet). It displayed BAS strengths and a number of weaknesses: fragmentation of research activities, brain drain, ageing and others. The '*National Strategy for Scientific Research to 2020*' has been accepted by the Bulgarian Parliament in August 2011¹. ICT is considered as one of the five priority areas. The Strategy aims to position Bulgaria among the 'moderate innovators' in the European Innovation Scoreboard by 2020. It enumerates issues that are not yet settled by the Bulgarian officials and academic circles, among them: sustainability and forecastability of private investments in the R&D sphere (currently, R&D is funded mostly by the public sector); lack of dynamics of the public scientific system institutional structure; unfavourable age structure; underdeveloped innovation infrastructure; inactive innovation mediators (e.g. TTOs; centres for commercialisation of IPR, etc.); and limited instruments inefficiently applied at national scale in support of innovation. We note that some negative findings, listed in the National Strategy as general threats, are not valid for IICT with the same strength (for instance, only about one half of the IICT funding comes from the public budget subsidy of BAS; the institute is sustainably good in attracting projects funded by international and Bulgarian institutions as well as by the Operational programmes of the EU Structural Funds. In 2011 IICT had 46 running projects, 22 of them with international funding and 24 with national funding. The institute has a relatively high number of PhDs (currently 40), with 5-10 new PhD students per year. The average age of the IICT researchers, together with the PhD students, is less than 40 years. However, other negative findings are valid for IICT and the context where the institute is active: lack of know-how in the research product marketing, low capacity of the Bulgarian business to absorb innovation, limited instruments to support innovation etc. The development of spin-off companies in BAS is still in its embryonic stage. In 2010 BAS fully reformed its Joint Innovation Centre² employing there young and energetic experts but the issue of providing funds for international patent applications remains a critical bottleneck. Summarising all positive and negative findings, we made the following SWOT analysis.

¹ <http://dv.parliament.bg/DVWeb/broeveList.faces>, № 62, 11 August 2011, pages 1-38 (in Bulgarian). An English version is available at the site of the Ministry for Education, Youth and Science, see http://www.minedu.government.bg/opencms/export/sites/mon/en/top_menu/science/national_research_strategy-2020.pdf

² <http://www.jic-bas.eu/index.php/en>

Strengths	Weaknesses
<ul style="list-style-type: none"> • Human Resource excellence: leading research groups and world-wide renowned scientists. • Sustainable capacity building and raise of funding: experience in a FP5 'Centre of Excellence', a FP6 'Centre of Competence' and a 'Centre of Excellence in Supercomputing Applications' (2009-2012) funded by the Bulgarian National Science Fund. • Strong IICT core infrastructure available - e.g. IICT hosts the National GRID Centre. • National Research Infrastructure Roadmap leader in: the Bulgarian Supercomputing Centre and CLARIN-BG. • Established long-standing tradition in joint research with leading international partners. • Proven abilities of the IICT seniors to raise national and international funding. • Proven abilities of the IICT seniors to attract outstanding incoming young researchers - e.g. with Marie Curie FP7 reintegration and visiting fellowship grants. • Experience in PhD training, incl. international PhD students, and in MSc and BSc training. Relatively favorable age structure. • Experience in the organisation of top scientific events: e.g. RANLP, LSSC, AIMS, NM&A. • Long-term partnership with high-tech Bulgarian SMEs. • Patent applications to Bulgarian Patent Office. An IICT TTO will be established with partial funding by the Competitiveness Operational Programme for the period 2012-2014. 	<ul style="list-style-type: none"> • Insufficient modern equipment in key fields like 3D microstructure input/output, sounds, speech, dynamics which makes IICT dependent on international partners' data, and prevents: <ul style="list-style-type: none"> ○ setting of long-term research agenda for advances in hot ICT areas; ○ exploitation of the full potential of the available core computing infrastructure, ○ cooperation with leading EU partners in the respective ICT topics, ○ know-how transfer to Bulgarian User Communities and society in general as well as ○ Development of attractive training programs for young researchers in the respective areas. • Weaker international orientation in some areas of the IICT research; focus on locally-important topics in some papers published in local journals and proceedings of local forums. • Relatively low-flow of incoming researchers from EU and third countries. • Insufficient dissemination activity for promoting IICT as a key actor in the 2020-agenda. Insufficient IICT visibility as innovation driver. • Lack of expertise how to approach the technology transfer and IPR issues. Only first steps towards development of an IPR protection strategy for the institute are made. No applications for patents to the European Patent Office. • Lack of strategy for building industrial User Communities and attracting PhD students from innovation-absorbing companies.
Opportunities	Threats
<ul style="list-style-type: none"> • Acceptance of the National Research Strategy in August 2011. Defining ICT as a priority area. • Forcing national activities in ICT as a response to the 'Digital Agenda for Europe'. • Active regional policy for strengthening the innovation potential – e.g. planning to open a Sofia Technology Park in 2013. • Planning investments in the research training of young scientists under Structural Funds. • Stimulation of private sector involvement in scientific activities, via various instruments of the Operational Programmes. • Adopting the instruments of international evaluation which facilitates the recognition of IICT as the leading ICT driver in Bulgaria. • Reforming the BAS Joint Innovation Centre and BAS Patent Office. • Improved image of BAS after the self-initiated evaluation by ESF/ALLEA. 	<ul style="list-style-type: none"> • Very slow and/or ineffective implementation of the Measures proposed in the National Research Strategy, incl. the Policies for <ul style="list-style-type: none"> ○ targeted funding for the Centres of Excellence at regional/national level, ○ implementation of two-way researchers' mobility (including attraction of foreign experts or Bulgarian emigrants). • Lack of effective National Strategy for encouraging the developments of high-tech industry and investments in ICT innovation. • Delay in launching of the National Innovation Strategy. • Slow reforms via non-coordinated and incoherent governmental programmes without practical implementation of the evaluation results. • Lack of resources and adequate policy to support international patent applications within the Bulgarian Academy of Sciences.

The **Action Plan** for unlocking the IICT research and innovation capacity proposes a **set of Actions** to achieve five **Strategic Priorities**:

Strategic Priority 1: Strengthening Human Potential

Actions:

- Strengthen the **research cooperation inside the Institute**, promoting cross-departmental research activities and clusters.
- **Attract researchers from EU and from third-countries**, endorsing the European Charter for Researchers³ as well as the Code of Conduct for the Recruitment of Researchers⁴.
- Establish the practice to elaborate **Career Development Paths** for young researchers and adopt control mechanisms to monitor their progress.
- **Reintegrate experienced scientists** by attracting them as collaborators in advanced projects.
- Encourage **international mobility** for PhD students and postdocs, as well as sabbatical leaves for the seniors and develop mechanisms to facilitate both their leave and return to IICT.
- Stimulate the **publication activity** as well as the **development of technological prototypes**; these outputs should be major aspects of the staff attestation.

Strategic Priority 2: Providing up-to-date Research Infrastructure

Actions:

- (i) **Acquire state-of-the-art infrastructure** allowing for advanced ICT research, development of novel research prototypes and international level of PhD training. In order to achieve this, **combine funding** from various sources: budgetary, national, international etc.
- (ii) **Improve the effectiveness of the existing equipment** and ensure its shared use in the whole IICT.
- (iii) **Cooperate with other academic organisations** in Bulgaria, on the base of the IICT-provided computational facilities, for shared use of their infrastructure.
- (iv) **Encourage the access to advanced computational facilities** abroad and participate in pan-European networks for collaborative open access to high-performance computers.
- (v) Stimulate the **open data, repositories and platforms exchange** and **deliver public resources** in fields of vital national importance, e.g. public electronic dictionaries of Bulgarian language.
- (vi) Establish facilities for **distant learning** and **remote access**, to ensure maximal effectiveness in the use of equipment.

Strategic Priority 3: Strengthening IICT Innovation Capacity

Actions:

- (i) **Improve the policy of planning research activities and adopt the valorisation process** (detection – protection – publication – exploitation) in order to identify, protect, add value and transform research results into IT services and technologies.
- (ii) **Define short-term and long-term priorities** of the institute in its IPR-protection strategy (in 2012).
- (iii) **Build User Communities** of industrial representatives and regularly organise meetings and seminars where IICT results are presented to potential clients and users.
- (iv) **Build innovation capacity by intensive training** of all researchers and PhD students and inform them about the IPR protection mechanisms. Adopt well-known procedures for transferring research results to industrial solutions, which are easy to understand and follow.
- (v) **Establish a Technology Transfer Office**, to monitor internally the valorisation and IPR issues

³ i.e. the rights and obligations of researchers and organisations in which they are working

⁴ i.e. the principles of equality of the employment procedure towards all researchers in Europe and transparency of recruitment procedure and employment

and to take care about the IPR protection in close collaboration with the Joint Innovation Centre of BAS.

- (vi) **Promote co-operation** with business and public administration and make active use of various schemes supporting academic-industry joint projects.
- (vii) Organise **PhD student practices in high-tech IT companies**.

Strategic Priority 4: Endorsing the 'Science-in-Society' principles

Actions:

- Support the **dialogue between IICT and the society at large** in various forms by regular information dissemination via all media types. Actively use the dissemination channels of BAS.
- Enrich the IICT **Web-site** with attractive information/links about research results, fancy demos, news, discussion forums and blogs, electronic newsletters submitted automatically to subscribers etc.
- Use **Web-networks** for promoting professional activities, **job portals** for posting offers and **social networks** for spreading out news to general public. Create a **Face-book group** of IICT friends.
- **Develop a group of trained specialists**, including PhD students, who speak to journalists, public officials, schools and so on. In this way, bring the latest IICT achievements closer to the society.
- **Strengthen links to professional organisations**, e.g. explain the benefits of IICT research results to medical doctors, energy experts, professionals in transport and so on.
- **Improve** the organisation of the **Open Doors Days** and actively promote the role of IICT as IT innovation driver.
- Participate with stands in **industrial fairs and exhibitions** both at national and international level.

Strategic Priority 5: Organising regular assessment of the IICT achievements

Actions:

- **Develop an IICT assessment plan**, co-ordinated with the BAS assessment cycle every two years.
- **Select assessment criteria** which promote not only top-level research results but equally respect the applied research, development of industrial prototypes, project-based industrial research and IP protection activities.
- **Involve external international evaluators** in all assessment procedures. Invite Governmental Representatives to assess the implementation of the IICT IPR-protection strategy and the success of the technology transfer measures, esp. Representatives of the emerging 2020-structures.
- **Disseminate publicly the assessment results**.

The work plan of **AComIn** presents a clear vision of how to implement the major Action Plan activities.