



Research-Development-Innovation (RDI) Strategy at Babeş-Bolyai University (UBB) planned for 2021-2024

- Approved by Senate Decision No. 59/17.05.2021 -

Note: This document contains ideas and sections from the ProUBB+ Programme, the UBB Strategic Plan 2020-2024, UBB Scientific Council documents, previous UBB RDI strategies, The European Union Framework Programme for Research and Innovation 2021 - 2027 (Horizon Europe) and other documents of general relevance.

I. Introduction

Scientific research constitutes the exploration, development, advancement and implementation of scientific knowledge and scientific know-how in order to address theoretical and/or practical challenges. The principles of scientific knowledge are logical consistency, objectivity, replicability, anti-dogmatism, and social responsibility. Knowledge is usually expressed in statements which are assigned a truth value. Discovered accidentally or as a result of a quest, knowledge must then be organised into a structured system of scientific knowledge.

In scientific research, a distinction is made between basic research, applied research and research for development, innovation and technology transfer.

Basic research (theoretical or experimental, exploratory or strategic/oriented) is the search for, generation, and dissemination of fundamental knowledge. Knowledge that relates to rules and principles is the defining outcome of basic research. As a general rule, they are formulated/submitted to academic debate in publications. Basic research can be exploratory (mainly associated with theoretical issues) or strategic (mainly associated with practical issues). Basic research also involves formulating and testing hypotheses, models and theories concerning theoretical or practical phenomena and processes.

Applied scientific research incorporates basic scientific knowledge and empirically based knowledge into a finished product, process or service that can, theoretically, have market value. In such cases, knowledge refers to procedures or to the translation of knowledge from basic research into specific contexts. The findings of applied scientific research are also disseminated through publications. Applied research

can be translational (using basic research results to solve practical problems) or practically informed (seeking solutions to well-defined practical problems).

If the knowledge is sufficiently process-oriented to be translated into finished products, technologies and services, we speak of research and development, the outcome of which is formulated in publications and/or patents and prototypes. The translation of scientific knowledge from publications, patents and prototypes into economically and socio-culturally relevant products, technologies and services is innovation through knowledge transfer and dissemination, a process in which scientific research and researchers are only one component alongside the socio-economic environment (e.g. industry, users, policy makers, etc.). Thus, development and innovation is the process of bringing a product, technology or service produced by applied research, directly or through technology transfer, to the level of being put into production in order to develop into a product, technology or service with market value.

The scientific research activity at Babeş-Bolyai University (UBB) covers all three fundamental components of the RDI activity: (1) fundamental and applied research; (2) development (creation of new prototype products, technologies and services through research); and (3) innovation (implementation in the socio-economic environment of innovative services, technologies, and products resulting from fundamental or applied research). Moreover, in the context of the emerging pandemic and post-pandemic situations, research-innovation-development must be carried out not only to a high standard, but also at maximum speed, so that we can be at the forefront of creating or developing an innovative idea/product/technology/service.

II. Strategic objectives of research and development activities

RDI activity at UBB from 2021-2024 will pursue the following strategic goals:

(1) Maintaining and increasing the competitive edge of UBB at national level, in as wide a range of fields as possible. The aim is also to gain a competitive edge at international level in several key fields where UBB is already well positioned in international scientific research, as well as to open up current/prospective multi- and cross-disciplinary themes and fields in scientific research and artistic creation/ sports performance (bioinformatics, cybersecurity, quantum technologies, climate change, renewable energies, digital humanities, data science, etc.). Thus, UBB has to be the first university in Romania in terms of its educational, research and service standards towards the community and society and to become more appealing and competitive at European and international level. In terms of research activity, UBB has been consistently ranked among the best in the country for many years, with a highly competitive and research-oriented outlook. Building on the experience gained, scientific and cultural-artistic achievements should be further developed and expanded to other components (development-innovation through technology and knowledge transfer and services to the community and society) and tested in international competitions. The multidisciplinary framework resulting from the establishment of UBB academic schools and development models in the STEM+/STEAM paradigm will be considered.

(2) The UBB-500 objective, set as part of an overall objective to secure UBB's status as a world-class university, which will help draw in students (from home and abroad), valuable human resources and additional financial resources.

(3) Turning UBB into a platform for attracting high profile Romanian and foreign academics and researchers, either from the country, or from abroad. To this end, UBB will strongly encourage both the reintegration of top Romanian researchers from abroad (through national programmes or through its own programmes and initiatives, e.g. the STAR-UBB Institute, the associate researchers programme, the visiting fellows programme) and a policy of recruiting/employing the best researchers from Romania and abroad, within financial limits (through national and/or international programmes or through its own programmes and initiatives, e.g. the STAR-UBB Institute or the associate researchers programme).

(4) To provide the framework in which the UBB's RDI activity, following the example of the world's competitive research-oriented universities, can underpin all other core academic activities: innovative teaching and specialist services to society and the community. A world-class university does not only ensure that knowledge produced by others is taught well, it does not merely use the knowledge produced by others to serve society, but produces knowledge in the academic process, which makes education interactive/open and the relationship with society innovative. To this end, the use of methods, platforms and programmes/projects/networks will be considered in order to support the teaching process or the applied scientific research or technology transfer process and the provision of innovative services to society (e.g. UBB's new academic pedagogy, UBB-EON XR, European Institute of Innovation and Technology, InfoBioNano4Health, The Guild, etc.).

(5) Increasing UBB's profile as an active player in national and European culture and civilisation, through valuable scientific, cultural and artistic contributions. To this end, efforts at institutional level will be focused on providing the necessary conditions to support teachers and researchers in getting their scientific, cultural and artistic outputs/creations started and exploited on a competitive international market.

(6) UBB's contribution to the overall European effort towards: (a) a smarter Europe (through research and innovation for its citizens - Citizen Engagement); (b) a greener Europe (renewable energies, combating climate change, public health); (c) a more connected Europe (through strategic secure digital networks - Cloud, Quantum Computing & Communication). From this point of view, the development and strengthening of prestigious international scientific collaborations (top 500 universities, top research institutes in Europe, America or Asia, other partners from the socio-economic/cultural-artistic/sports environment) are strategic approaches for the forthcoming period.

III. Specific research and development objectives and strategies

In order to achieve our strategic goals, the following objectives and operational strategies are being considered:

Pillar 1 (Internationalisation and Excellence):

Objectives: Setting research performance indicators, broken down by levels of development, in line with the best international standards. Increasing, in close relation with the quality and number of scientific publications, the participation in scientific events in the country and abroad. Connecting on a large scale UBB's RDI/ cultural/ artistic/ sports programmes to joint activities with international partners (universities/ research centres/ institutes abroad).

Specific strategies:

- In the process of scientific research, development and innovation and in any academic evaluation conducted at UBB, the emphasis on endorsing and prioritising scientific research results (verifiable, publicly accessible and applicable to society) from the main stream of scientific information available at international level defined as:
 - Scientific publications:
 - Articles
 - In Web of Science indexed journals in: (a) Science Citation Index Expanded; (b) Social Science Citation Index; (c) Arts & Humanities; and (d) Emerging Sources Citation Index;
 - In SCOPUS indexed journals;
 - The Humanities field includes ERIH-Plus indexed journals.
 - The legal sciences field includes Westlaw and LexisNexis indexed journals.
 - Web of Science indexed book chapters/books listed in the Book Citation Index and/or searchable in international libraries in the WorldCat international catalogue.
 - Participation in high-profile conferences and/or conference proceedings indexed in relevant databases can be counted as minimum performance standards for lower teaching and research positions (research assistant, university assistant, research scientist), especially as a career entry and/or for fields where they constitute a significant practice in the field (e.g. computer science, engineering).
 - The specificity of the publications will be differentiated according to the field, respecting the nationally specific fields as defined in several normative acts. The UBB Scientific Council is responsible for the analysis of the differentiations, so as to preserve the international criteria specific to each field, with the adaptation of the indicators to the UBB potential and specificity.
 - Trademarks/Invention patents;
 - Technology and knowledge transfer;
 - Cultural/artistic products, sports performances, innovative technologies and services implemented in the socio-economic environment, based on patents, ORDA or other national authority registrations (e.g. cultural, professional).

- Encouraging UBB scientific publications that contribute to internationalisation and to the emergence/development of internationally competitive schools of science, by maintaining the UBB programme of supporting its own WoS indexed or listed publications.
- Further developing the Presa Universitară Clujeană (PUC) publishing house to become a leading publishing house for Romanian academic publications, following the western model of university publishing (with titles accessible in national/international book stores and libraries, in relevant online systems, etc.).
- Advocating and implementing the *Open Science* concept, focusing on its two main components: unrestricted access to publications and to scientific information (open data/data management). The engagement of UBB researchers in the Open Science Approach can hold significant potential for increasing the impact of research output in three ways: (1) many of the recently developed (and highly topical/impactful) research areas/topics use Open Science, Open Data, Citizen Science, (2) the transparent character can provide an additional incentive for competitiveness against the background of easier/direct/effective engagement with competitors in the field, (3) access to research output is easier for the specialist as well as the more general public where applicable/needed/relevant. Open Data, Open Science, Citizen Science concepts are unfortunately very little present/known/understood in the UBB scientific community. A dedicated information and consultancy campaign could be beneficial. The expertise acquired by the CMCŞ will be used as a reference point for consultancy, coordination/logistical support of information campaigns or other related activities.
- The reflection of scientific results in the academic evaluation at UBB, in the light of the above.
- Making use of the positive experiences (projects and programmes implemented) in the activity of the Institute for Advanced Studies in Science and Technology at UBB (STAR-UBB Institute) to reinforce the international excellence of UBB.
- Using UBB's membership in the Guild of European Research-Intensive Universities - to strengthen the research excellence.

Pillar 2 (Prioritisation and Competitiveness):

Objectives: Establishing strategic research areas, involving multi-, inter- and trans-disciplinary components, that can provide a competitive advantage to UBB (including the recruitment of international students and top national and international teaching/research staff), at home and abroad, and publications of high impact, such as Nature and Science or Q1 WoS or Scopus publications. The intention is to continue and strengthen the priority fields identified in the previous reference periods, with a focus on endorsing the InfoBioNano4Health concept, as well as other smart specialisation lines stemming from the National Strategic Framework for Research, Development and Innovation 2021-2027 (including the Smart Specialisation Strategy NV 2021-2027), the European

Leaders' Agenda in Sibiu for 2019-2024, including both basic and applied research:

- Natural and engineered nanostructured systems; processes and (bio)technologies at different scales from molecular to macro level (including advanced materials); bioinformatics;
- Health (broadly defined: public, mental, environmental, etc.);
- Virtual/augmented reality, artificial intelligence, cybersecurity, blockchain, quantum technologies and communications, high performance computing, data science;
- Sustainable development: natural resources, economic, social, and environmental development;
- Quality of life and environment; climate change; social and human values and behaviour;
- Integration through culture and religion.

Strengthening and improving UBB's position in national and, especially, prestigious international rankings or hierarchies. Providing a high-performance research infrastructure at international level, enabling cutting-edge research with outputs that can be disseminated in high-impact contexts (e.g. *Nature*, *Science* etc.).

Specific strategies:

- Using both scientometric and peer-review assessments to identify: (a) fields of expertise of UBB academic staff; (b) UBB Schools of Science of excellence. These fields of excellence must be consistent with European and international trends, but, where possible, fields that can ensure UBB's competitiveness in the medium and long term will also be established, even if they may not currently be European Union or international priorities;
- Identifying (based on annual assessments) and implementing effective strategies to improve UBB's scores (overall and by subject area) in international rankings;
- Providing unrestricted online access to relevant literature;
- Development of projects at institutional level to be submitted to national/European RDI programme competitions for financing research infrastructures in order to support the rUBB platform;
- Budgetary/extra-budgetary funding for strategic research infrastructure through the constitution of a dedicated fund at institutional level (faculty/ academic school/ university).

Pillar 3 (Human Resources and Administrative Services):

Objectives: Recruiting prominent national and international scientists, increasing the number and maintaining the tenure of RDI staff, including experts and research project managers. Confirmation of the EU Commission's Human Resources Award for Excellence. Development of a teaching/learning system based on research-based learning and guided research in all academic sectors of UBB (including distance education and continuing education by employing modern teaching/learning technologies, e.g. EON-XR); Implementation of

modern administrative systems within UBB in order to position it as a world-class university. Redesigning the UBB administration accordingly, using institutional and national expertise in the field, so that academic performance is stimulated by the administrative component;

Specific strategies:

- Supplementation and implementation of the UBB RDI personnel statute, in line with the legislation in force and with the international set of best practices from international leading universities;
- Implementation of the *Human Resources Policy for teaching and research staff at UBB*, part of the Action Plan for the confirmation of the European Commission's Human Resources Award for Excellence;
- Preparing and submitting the application for the European Commission's evaluation of UBB for the Human Resources Award for Excellence;
- Further encouraging the employment of researchers on a fixed-term basis, funded by extra-budgetary resources obtained from own grants or other sources;
- Further developing and consolidating the UBB adjunct fellow/researcher status;
- Developing post-doctoral programmes for young researchers (both within and outside UBB) in order to identify top human resources for research and artistic work;
- Ensure flexible academic career paths through the Individual Academic Career Plan with specific indicators related to the RDI component;
- Prioritising research output among the criteria for filling teaching positions and raising minimum performance standards above the national minimum standards; in addition, an emphasis on the international exposure/recognition component should be fostered in all fields of science except those where the national/specific component is dominant. In this context, greater emphasis should be placed on recruitment by widening the fixed-term positions approach;
- Training of experts/managers in research and in writing major institutional projects in the EU research funding framework programmes, but also in structural funds; using the framework provided by the Support Centre 2020 - UBB;
- Implementation of the Code of Ethics and monitoring mechanisms in the RDI activity;
- Promoting gender equality in research;
- General assessment of the administrative component (supporting the RDI activity) at UBB, in order to match the academic-administrative requirements with the existing human resources, by specialist fields (human resources, accounting-finance, procurement, etc.);
- Reducing bureaucracy and streamlining the administration through continuous upgrading and further training of administrative staff and by extending the criteria of assessment in terms of efficiency and professionalism of administrative staff supporting the RDI activity.

Pillar 4 (Shaping and reinforcing RDI units):

Objectives: Organising UBB's RDI units as high-performance research environments (including the development of start-ups, spin-offs, business incubators, etc.) or as development-innovation centres through technology transfer or services to the community/society, while avoiding excessive bureaucracy and the overlapping of responsibilities. The scientific programmes of UBB RDI units will be promoted in the STEM+ paradigm (*Science, Technology, Engineering, Mathematics*, with a cross-cutting social humanistic dimension) together with other disciplinary, multi/inter/transdisciplinary developments, with an influence on the educational components as well as on the relationship with society.

Specific strategies:

- Building high-performance research environments that can attract quality professionals both nationally and internationally and/or that can produce top professionals, nationally and internationally;
- Level and matrix based organisation of the UBB RDI units. By level based organisation we refer to organisation in: (1) research laboratories/collectives; (2) research centres (which must include one or more laboratories); and (3) research institutes (which incorporate one or more research centres). By matrix based organisation we refer to the establishment of strategic research institutes at UBB level, which will integrate across disciplines several research centres and the resources of the 22 faculties within UBB;
- Internal, national and/or international accreditation of the RDI units within UBB;
- Establishment of strategic RDI units for UBB, to be financed directly from UBB extra-budgetary resources (e.g. through sponsorships). This can be done by identifying research institutes/ centres/ laboratories of excellence;
- Development of start-ups, spin-offs and business incubators, including their internal regulations (e.g. ownership), which can creatively and efficiently use UBB's innovative ideas from a financial point of view. In this context, the role of the UBB Centre for Management and Technology and Knowledge Transfer plays a key role.

IV. Innovation and technology and knowledge transfer at UBB. Innovative and cultural services to society and community

Innovation is a fundamental mechanism of competitiveness and excellence at UBB. Innovations, as part of high-quality research, are defined in three ways:

- (a) theoretical (including cultural achievements),
- (b) methodological (e.g. new methodologies and techniques) and
- (c) practical (e.g. complex technologies, complex services, products, including artistic products and sports achievements).

Research activity (RDI) is the factor that sets higher education and research institutions apart in terms of performance and visibility, contributing to knowledge,

through RDI, as a catalyst for all other academic activities (e.g. teaching, innovative services, administration). In all forms, innovation means the production of new scientific concepts, methodologies, achievements and/or products/services/technologies, that are recognised and assimilated in the national and international scientific and socio-economic community, setting new standards and/or changing existing practices in the field.

UBB needs to be actively involved in the process of finding and supporting innovations generated as a result of direct funding of research projects. A specific procedure established by the UBB Centre for Technology and Knowledge Management and Transfer, with the assistance of the UBB Scientific Council, will be used to identify these innovations. Innovations will then be disseminated institutionally via all available means (from the official UBB website to other modern or classical dissemination methods), iterating the information according to the following scheme:

- (1) Title of Discovery/Innovation/Creation;
- (2) Name and affiliation of the authors (a photo of the authors may be included);
- (3) Description of the discovery (maximum one page), to which a maximum of one picture related to the discovery may be added;
- (4) Description of funding (instrument type, period and project code);
- (5) Links to: (a) media and/or journal presentations and reviews; (b) publications and/or patents underpinning the discovery; (c) description of how the innovation/creation has been disseminated (through technology and/or knowledge transfer) to society.

In addition, an annual prize for applied research awarded at UBB is envisaged, which would be awarded to the RU or to the analysis/creation/consultancy laboratory that will yield the highest income from applied research contracts and to the researchers with the highest individual contributions to applied research.

On the other hand, there is growing discussion on the extent to which the interests of universities and society remain similar in areas such as funding, curriculum structure or research priorities. UBB focuses on offering innovative and cultural services to society and the community, so that it can be the first to benefit from scientific knowledge, thus generating a knowledge-based society, an advanced civilization with a high standard of living. These services should not be perfunctory or commonplace, but innovative, advanced, based on the latest scientific research and/or cultural/artistic creation in the field, so as to be consistent with our medium- and long-term vision of UBB: a world-class, research-intensive university with sustained entrepreneurial developments, generating economic growth, technological innovation, while ensuring that the university does not turn into what some believe it should become, namely 'profit-driven transnational corporations'. In this context, we should point out that, as far as artistic and cultural creation is concerned, the new UBB Platform for the Humanities will be fully exploited.

The service units in the UBB departments and RDI units (1) connect UBB with the community, the latter having access to cutting-edge cultural services and creations at affordable prices; (2) attract financial resources; and (3) provide UBB students with research- and creation-oriented traineeship arrangements and opportunities. Last but

not least, services can be provided as part of lifelong learning and continuing education through postgraduate or open courses. The UBB Centre for Technology and Cognitive Management and Transfer is responsible for the effective implementation of innovative services to society and the community.

V. UBB Competitiveness and Excellence

UBB is a comprehensive university, rewarding academic contributions at all levels - research, education, service to society/community, administration - through annual awards (e.g. prizes for scientific excellence, teaching excellence, relationship with society, excellence in administration) and public endorsement of its outstanding personnel (e.g. 'teacher of the month'). In a world-class university, the international competitive edge is maintained by top professionals. At UBB they constitute a virtual college of excellence, defined by the fact that its members, each in their field of reference, are credible interlocutors in international environments of excellence.

In this context, the 'UBB Interviews = Excellence' will complement the other approaches mentioned above, which already promote the academic contributions of the UBB community, by seeking to better profile the UBB personnel who contribute directly to UBB's international competitiveness and excellence. UBB specialists will be invited to the interview:

- with publications in leading international journals (Nature/Science/Top 10 Web of Science publications in the field) and prestigious international publishers (e.g. author/co-author of scientific papers published by Oxford University Press);
- winners, as editors, of major international grants (e.g. European Research Council/ERC, MSCA, international grants of more than 1,000,000 Euro, etc.);
- winners of major international scientific prizes in the field. Interviews will be conducted in Romanian and English (with translation into Hungarian and German where necessary).

In order to increase the national and international competitiveness of UBB, both in terms of attracting students at master's and doctoral level and in terms of securing the financial resources necessary to carry out high-quality research, research will be fostered in areas identified as specific to the university and in which results have been obtained that are internationally and nationally recognised or that are deemed, on the basis of an international evaluation process, to be likely to lead to outstanding results within a maximum of 4-5 years. The following actions will be carried out to this end:

1. Regular evaluation of the performance of teaching and research staff (every three years, as part of the Individual Academic Career Plan) and of existing research units (every 4 years) and the development of pillars of excellence in scientific research at UBB, based on performance indicators adapted to each field and established in consultation with specialists in the major research fields developed at UBB.

2. Conducting debates/seminars on cross-disciplinary themes and identifying multi-, inter- and cross-disciplinary fields with significant potential contributions to

enhancing UBB's international/national competitiveness, using the collaborative framework provided by the UBB Academic Schools.

3. Preserving the in-house award programme for individuals and RDI units with internationally and nationally endorsed results by publication in scientific journals or reputable publishers. Establishing awards (on a competitive basis) for artistic and cultural creation and outstanding sports achievements.

4. Providing regular further training (at least every 2 years) and periodic evaluation (at least every 3 years) of the performance of administrative support staff for RDI activities, with tangible impact on the improvement of their core activities.

VI. Research evaluation at UBB

Several key principles guide research evaluation:

- (1) the actual aim of scientific research is to produce knowledge (discovery) through publications, patents and/or products/technologies/services;
- (2) knowledge/discovery is presented/transmitted through publications, patents and/or products/technologies/services;
- (3) once knowledge is expressed in publications, patents and/or products/technologies/services, its impact must be assessed;
- (4) impact assessment must be multi-tiered and comprehensive, educational (e.g. attracts students; mentions of the discovery in other works), technological, cultural, economic, vocational training, service, policy and strategy generator, etc.;
- (5) In assessing research, UBB privileges: (1) scientometric systems (where applicable) and/or (2) the decision-making by expert panels through peer-review assessment. Whichever option is considered, two key components are taken into account in the evaluation of scientific research: (1) the publicly verifiable research/results and (2) the impact that this research produces.

The publicly verifiable research findings are expressed in terms of knowledge with a relevance for solving theoretical and/or practical problems and are made operational through:

- publications such as articles, book chapters and books;
- patents;
- cultural/artistic products, innovative technologies and services implemented in the socio-economic environment, including sports performances, which are based on patents, ORDA registrations or other national authorities registrations in the field.

'Predatory' and 'vanity' publication in journals, publishing houses and conferences will be discouraged. UBB researchers will be advised to refer to lists of publishers and/or journals with potential ethical issues (as reviewed by the UBB Scientific Council on the basis of international practice), as these will not be considered in internal evaluation proceedings.

Output impact needs to be assessed in a multi-level, complex approach and made operational through:

- research implications
 - references to the findings in other works and research groups, with an impact on future collaborations. When knowledge is published in leading journals and/or by leading international publishers (e.g. as books), the likelihood that it is rigorous, accessible, relevant and valuable to the scientific community is higher because it has undergone a rigorous peer review/ assessment process that endorses it.
- educational implications
 - attracts students and supports the development of degree programmes
- practical consequences - relevant theoretical and/or practical problems are solved - from one of the following perspectives:
 - technological
 - cultural
 - economic
 - vocational
 - services
 - public policy, etc.

The general principles underlying any research assessment process are:

- The principle of relevance to science and society
- The competitiveness principle
 - Are they useful in solving theoretical and/or practical problems of importance to science and society?
- The transparency principle
 - Is the criteria used in the research assessment clear and explicit?

Teaching activity, although interrelated with RDI, cannot be measured by this system. Similarly, administrative activity has its own evaluation schemes. Also, an important point is to distinguish between RDI activity and specialised services. RDI is about generating original knowledge. Using knowledge to solve a problem (e.g. business consultancy, career counselling, etc.) is professional specialist work, not RDI. Innovative specialised services are situated at the intersection between professional and RDI activities, involving both.

VII. RDI funding at UBB

Scientific research at UBB is funded by:

- own resources of the research groups and units, based on grants won in local and international competitions;
- services to the community;
- internal resources and sponsorships secured at department, faculty or university level to support researchers and teachers with outstanding scientific results, including through internal grants.

In order to ensure the equipment operation and the continuity of research undertaken through grants, according to the current UBB provisions 40% of the value of

these grants is returned to the research groups directly or indirectly through the administrative units they belong to. These provisions are not only further underpinned by the present strategy, but are also being extended to contracts with the socio-economic environment.

In accordance with the provisions of the UBB Charter, funding will be allocated as a priority to the top-performing departments and structures of UBB, in relation to their contribution to obtaining these funds. These allocations aim to improve the academic quality of teaching, learning and research. The allocation of budget funding is based on the quality criteria and standards used in the ranking of universities and the ranking of degree programmes established by the CNFIS and approved by the line ministry as well as those set out in the university's institutional budget funding contract.

Implementation of a start-up grant scheme (modelled on seed grants) for new employees with outstanding results - possibly starting with a 2-3 year trial (e.g. for those in the head-hunting category) should also be considered, while for current employees, SEED grants should become a selective funding instrument in the future.

VIII. Conclusions

The aim of scientific research is not to produce publications, patents and/or products/technologies/services. These are only forms of expression of the discovery/knowledge produced in the research process. The relevance and impact of the discovery is further assessed in science, technology, culture for society and citizens (citizen engagement), but also in training and education (e.g. attracting students; gaining international visibility, high profile international collaborations and partnerships, etc.). The careful implementation of this Strategy can ensure the development of UBB into a world-class university, providing high performance educational and research activities, an important prerequisite for the development of innovative scientific, technological and cultural services and products for the community and society.