



1st Progress Review Conference of the Universities participating in the “Excellence Initiative – Research University” programme

PRE-EVENT QUESTIONNAIRE

UNIwersytet Mikołaja Kopernika w Toruniu / NICOLAUS COPERNICUS UNIVERSITY IN TORUŃ

- 1) What evidence can be provided for early cultural change within the university, following selection in the first round of IDUB (e.g. acceptance of an enhanced and widely held ambition to perform cutting edge research)? Which measures have been undertaken to date for creating, supporting and maintaining an atmosphere and attitude of change and positive development throughout the institution?

One of the main pillars of NCU’s development strategy is the inclusion of all members of our community in cultural change that the IDUB program is designed to produce. An early indicator that this goal will successfully be accomplished is massive response of our undergraduate, postgraduate as well as PhD students as well as employees to IDUB’s open calls, which offer funding for first grants, research teams, mobilities, student projects, collaboration with external stakeholders, etc. So far, we have announced 18 competitions and received approximately 430 applications requesting funding for 20.5 MPLN.

In preparing competitions, we focus on transparent rules and peer-review evaluation, which responds well to the expectations of our community. We have undertaken several measures to promote our competitions and encourage the whole of our academic community to actively participate in implementing the IDUB program e.g. we (i) organized open meetings at all the faculties in December 2019 to present the main ideas behind the IDUB program and the steps in which it would be implemented; (ii) created a team for coordinating the implementation of the program, composed of employees and students from various faculties; (iii) sent out regular newsletters and published several interviews; (iv) reported on early successes of the program to the university authorities.

The IDUB competitions are designed to appeal to all members of our community. They include competitions for research projects by young scientists and students, high-quality e-learning courses, R&D projects with external stakeholders, etc. Our top researchers created 5 Centers of Excellence and 12 Emerging Fields, all of which are focused on interdisciplinarity and internationalization. In the wake of these activities, we have already noticed an increase in the number of research papers published in the best international journals (estimated increase by 3.9% in top 10% journals in one year, SciVal).

2) How is the implementation of the plan proposed by the university being governed? Who are the leaders of the implementation process? What are the measures for internal monitoring of progress in implementation of the plans?

The implementation of the IDUB program is directed by the coordinating team headed by Rector's Deputy, Dr. Agata Karska. The coordinating team oversees all IDUB activities and decides on strategic aspects of the implementation of the program. Six working groups have been created to implement activities related to six main aims of the program. The administration of the project is carried out by a newly established IDUB office (5 employees), whereas the evaluation of competitions lies in the responsibility of three groups of experts. The Centers of Excellence are self-managing; each of them has created their own administrative unit and research council. The structure and operation of the Centers is described in a dedicated order issued by Rector in January 2020.

The implementation team is diverse and inclusive. Half of the leaders of the working groups are women and among the members of the groups 18 are women and 16 are men. Each of these groups includes at least one member of the administrative staff; in total, there are also 4 students and PhD students.

With regard to performance measures, we strictly follow the schedule and steps described in the IDUB application. Rector's Deputy regularly reports on the progress of the program at weekly meetings of the Rectors and presents a written report every two months. In June, the University Board and the Deans received a half-year report. The internal audit issued in July was positive and suggested only minor recommendations.

3) What measures has the university undertaken to disseminate and promote the plan among the academic community?

- 1) General assembly of the implementation team (~40 people) consisting of representatives of the majority of faculties, dedicated to an in-depth analysis of the scope of the program.
- 2) Organization of open meetings at all faculties, including dedicated meetings with PhD students and the administrative staff.

- 3) Establishment of a new administrative unit – the IDUB office – which offers information about the program and supports members of our community at all stages of their involvement in the program.
- 4) Creating a website accessible through the main university page (<https://www.umk.pl/en/research-uni/>), incl. the budget, clips about the Centers of Excellence, etc.
- 5) Preparing newsletters and a dedicated Facebook page for students <https://www.facebook.com/Students-and-PhD-students-at-a-Research-University-NCU-111052453942011/>
- 6) Articles and interviews about IDUB in the university' internal magazine as well as regional and national media.
- 7) Printing a booklet about the program.

4) What are the main measures taken by the university to improve the quality of university governance and management, including quality-enhancing organizational changes?

We implemented a wide-spread change in the management of research by establishing Centers of Excellence and Emerging Fields, where active leadership, collaboration and interdisciplinarity are strongly promoted. In total, these teams have gathered 351 researchers (~17% of all NCU's academic staff), including 242 young scientists (69% of all team members). We believe that the success of these units will bring about a long-term change in the management of the entire university.

We have also taken several measures to improve the quality of administrative support.

- 1) We increased the number of the administrative staff responsible for internationalization and grants. In autumn, we plan hiring and training additional staff, with the aim of delegating ~20 people from central units to the faculties to support all aspects of the implementation of the IDUB project
- 2) We hired the first innovation advisor and expect three new hires in the Academic Business Incubator this year.
- 3) We will launch two new units in September 2020: a HR office with a special focus on career support for researchers and administrative staff, and a Think Tank, who will analyze the state-of-the-art of our university and prepare strategies for development.
- 4) We are in the process of selecting an external company to organize on-line soft-skill trainings this autumn for both research and administrative staff.
- 5) We are about to launch post-graduate study programs aimed to train mid-level management.

5) What are the main administrative measures taken by the university in the Priority Research Areas (POBs) including focusing and integration of research teams? What additional sources of research funding dedicated to POBs have been secured to date following success in the IDUB competition?

Five interdisciplinary Centers of Excellence connected with our POBs have been inaugurated on January 1, 2020. Their directors were appointed in November 2019, in accordance with the plans outlined in the proposal. The research councils of the Centers consist of 11 renowned scientists from abroad. The responsibilities of the directors and the councils are outlined in a dedicated order issued by Rector.

The directors have large autonomy to form the internal policy of their Centers – shape their structure and decide on their activities, so as to adjust them to the needs of the disciplines pursued in the respective Centers and integrate their members. As one of the first activities, two Centers are about to announce competitions for 1-year post-docs from abroad, whereas another Center has already hired three outstanding researchers from abroad (two of them applying for ERC-StG with NCU this autumn).

Apart from the activity of the Centers of Excellence, we focus on the disciplines related to our POBs in selected IDUB competitions. For example, such was the focus of a pilot competition for new e-learning courses. Three new Master programs in English are being launched in the areas related to POBs. Extra scholarships for PhD candidates are also reserved for the priority areas.

Several institutional grants and grants prepared by the Centers have been submitted to further support our POBs, including grants submitted to NAWA/STER and EU/ ITN and ERA Chair programs.

6) What consideration has been given to inter-institutional collaborations within Poland to enhance, for example, research that crosses traditional disciplinary boundaries? What progress has been made regarding establishment of a federation or merging with other institutions from the region, especially in case of universities which received relevant recommendations?

We have invited researchers from other Polish universities and research institutes to become our external experts evaluating applications in internal IDUB competitions (forming three councils for exact sciences, life sciences/medicine, and social sciences/humanities). Their engagement in our development has not only supported but also greatly added to our research expertise. Similarly, researchers involved in the councils of the Centers of Excellence as well as in the International Advisory Board bring in new perspectives and actively help us promote excellence.

While we do not plan any new federation, we work towards tightening links within our university and its two campuses in Torun and Bydgoszcz. A number of research teams created as part of the IDUB program have members from both campuses, which has also forced institutional changes in the administration. Research-wise, this has resulted in a considerable growth of our potential,

especially in the fields of chemistry and biology, which have directly benefitted from the expanding collaboration with the hospitals in Bydgoszcz. A growing collaboration is also built between the faculty of mathematics in Torun and the medical faculties in Bydgoszcz regarding the support in statistical analysis offered as part of the IDUB program.

7) What measures have been undertaken to identify, train, and support the next generation of international-quality researchers? How implementation of the IDUB plan contributed to enhancement of doctoral training, including recruitment to doctoral schools?

We have organized open competitions for PhD students, students and their teams, offering small grants for the best research projects and financial support for scientific internships abroad ('Grants4NCUstudents'). For young researchers, we organized competitions for the first individual grants with a separate path dedicated to young mothers. In this way, we seek to identify the most promising candidates for further support e.g., soft skills trainings and mobilities, and that they apply for an external grant with the aid of internal experts.

We launched the support program in statistical analysis, where qualified staff offers advice and training in advanced data management (the idea came from within our community after we had become a research university). We also purchased an on-line Nature course on scientific writing and publishing, which has been integrated into the curricula of the PhD schools. Furthermore, in September we will initiate a follow-up activity 'My first article in English' where face-to-face meetings with English-language advisors will be offered to PhD students. PhD students are also involved in TRIZ courses, competitions for start-ups and e-learning courses.

Unfortunately, the COVID-19 pandemics sharply limited incoming and outgoing mobility of staff and students, as well conference and workshop activity. Foreign recruitment into the PhD schools is not as dynamic as was expected due to uncertainty related to travel, etc. Although we managed to launch our summer programs for undergraduate students from abroad before March 2020, due to the COVID-19 outbreak we had to postpone them until next year; in the long run, these programs will help us in recruiting the best PhD candidates (<http://tssp.umk.pl/>).

Finally, significant support for PhD students is offered within our Centers of Excellence, which offer diverse assistance and motivational bonuses to their students, and create an interdisciplinary and international research environment.

8) What progress has been made to date in implementing human resources development programmes and in recruitment of researchers (whether Polish citizens or not) from universities outside Poland?

Currently, we are establishing a new HR office. Its two leaders responsible for organizing the system of support, recruitment and evaluation for research and administrative staff will start their positions in September 2020. As part of the preparatory work, a training package was prepared to be available to our community in the autumn that includes training modules covering:

- communication in a team (e.g., leadership, assertiveness)
- motivation and efficiency at work (e.g., time management, home office)
- self-development (e.g., outreach, negotiations)
- resistance to stress (e.g., building resistance, psychosomatics)
- security, anti-discrimination (e.g., mobbing, safety at a university)

We have organized several competitions supporting our researchers, e.g.:

- 1) 'Debutes' – for first individual grants, mostly for young researchers incl. young mothers
- 2) 'Inter disciplinas Excellencia' – for medium sized interdisciplinary research groups
- 3) 'Priority research teams' – larger research teams with significant internationalization and research achievements
- 4) 'Expert' – for internal researchers who are experienced in applying for and managing grant, and for inexperienced researchers who can benefit from merit-based support

One Center of Excellence has completed its employment plans in 2020, whereby 3 outstanding researchers were hired. The recruitment process involved members of the research council as well as external members and members of International Advisory Board.

9) What specific steps have been taken and what progress in implementation of the plan has been made to date to enhance international engagement (e.g. research collaborations with foreign universities or research institutes)?

Our most significant achievement in this regard was becoming a full member of the European consortium 'Young Universities for the Future of Europe' (YUFE), which groups 14 young European universities and non-academic partners. We were able to make a successful transition from a partner institution to a full member thanks to our involvement in a variety of YUFE activities, which has already brought about changes e.g. in education and administration. Additional funding allows us e.g. to expand soft-skill trainings and courses in English.

Collaboration with other institutions has so far focused on the activities of research councils and the advisory board. We identified the most promising partnerships for our Centers of Excellence and Emerging Fields, but the COVID-19 pandemics limited bilateral visits and organization of joint events. Most of the activities have been moved to 2021; the funding secured for 2020 was used for an internal competition for research grants related to COVID-19.

In education, we have secured external funding for the preparation of joint degree program in 'modern materials for chemistry and medicinal applications' with National University of Kyiv-Mohyla Academy in Ukraine. Joint degree PhD programs are being contracted with the Parthenope University of Napoli and planned with the Greek University of the Aegean. We have also obtained two accreditations of the European Accreditation of Engineering Programmes EUR-ACE for robotics and computer science.

10) What kind of changes has the university initiated in the education system on undergraduate and graduate level?

We have focused on the development of high-quality e-learning courses related to POBs. We organized a dedicated competition to select the best projects for online courses ('BELL'). In parallel, we invested into human resources and infrastructure necessary for making recordings, etc.

We also proposed three interdisciplinary Master's programs to be conducted in English that cover the research range of our 5 Centres of Excellence (Physics and Astronomy, Cognitive Science, and Pharmacy). All these programs have passed the university-internal accreditation.

In October 2020, we will also launch a pilot program of more advanced classes organized in parallel to regular courses, which highlight topics related to the Priority Research Areas. These classes are meant to engage our most-gifted students.

Additionally, we have started to prepare our 'Co-op' program in collaboration with the career center, where education will be combined with a full-time job in research institutes or companies.

11) The worldwide impact of measures and limitations introduced as a consequence of the COVID19 pandemic should be taken into account in the implementation planning, and institutions should be driven by the will to maintain strategic development as planned. The good use of digital means of communication has a crucial role to play. Thus, universities should see to it that they are up to this challenge. What actions have been taken by your university in order to reduce the negative impact of the pandemic on the implementation of the university development strategy?

Certainly, the COVID-19 pandemic has affected some of our plans, but nevertheless we have managed to achieve the milestones planned in the application and kept our spirits high. Among the actions which were affected by the pandemic are:

- organization of the summer programs for undergraduate students – websites, planning and recruitment were completed, but the programs were moved to summer 2021;
- mobilities: various competitions for students, PhD students, staff and guests were completed, but mobilities themselves could not take place, and were either carried out on-line participation or moved to the future;
- interdisciplinary conferences: we decided to postpone the competition for interdisciplinary conferences till autumn /winter season.

At the same time, the pandemic inspired us to undertake additional actions:

- BELL competition for new e-learning courses in English;
- two competitions for R&D grants related to COVID-19 spanning altogether all disciplines.

Altogether, out of 36.6 MPLN of our annual budget for the IDUB program, we made orders for 22.4 MPLN in the Torun campus alone, including 12.7 MPLN that has already been spent.

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So far, there are 222 individual beneficiaries of our competitions including 45 students and PhD students, who have been awarded 15.7 MPLN. In total, there are 1138 laureates of the competitions and members of the research teams created as part of the IDUB program, including 312 students and PhD students (27%).

The interdisciplinary teams need some time to organize their work. Now, digital means are primarily used to maintain and further their collaboration. Similarly, the implementation team of the IDUB program keeps regular on-line meetings, which are key to making progress in accomplishing the objective of the program. Despite the COVID-19-related problems, we are on the right track to deliver the results and facilitate long-term organizational changes that we promised in the IDUB proposal.