



NAZARBAYEV
UNIVERSITY

STRATEGY 2018–2030



Approved
by the decision of the Supreme Board of Trustees
of the Autonomous Organization of Education
“Nazarbayev University”
#6 dated December 1, 2018

STRATEGY

2018–2030





FOREWORD

Creating a world-class university in Astana was one of the most important components of the successful formation of the capital and the effective development of the scientific and educational potential of our country.

Just a mere eight years ago, Nazarbayev University opened its doors to 500 of the most talented and gifted students from all over Kazakhstan. Over the years, it has become a real embodiment of my long-cherished dream of creating a new flagship of the national system of higher education, capable of competing on equal terms with leading universities in the world.

This successful beginning is made possible by the joint hard work of many thousands of people. For the first time in the post-Soviet space, a special law on the University was adopted, which secured academic freedom of the university. The state provided comprehensive financial support for the construction of a modern campus with developed facilities for education, research and community engagement.

The university has grown significantly over the years. Now almost five thousand students are enrolled in 50 academic programs developed jointly with leading partner universities.

Today, university graduates contribute to the development of various sectors of our economy, create their own companies or continue their further education, including at the best universities in the world.

The faculty of the University comprises professors that do both teaching and research from more than fifty countries and they deserve special recognition.

From the very beginning, Nazarbayev University has positioned itself as a world-class research University and has built a formidable research infrastructure.

NU is building the innovation cluster Astana Business Campus, where professors and students have an opportunity to commercialize their research findings and cooperate with business.

The new Strategy 2030 sets ambitious goals, and by successfully fulfilling them Nazarbayev University will join the global community of leading research Universities of the world.

As a result of institutional accreditation, Nazarbayev University will be included in key university rankings, which will contribute to its promotion at the international level. In addition, it is planned to increase the number of students to 8 000 by 2025, of which 10% will be international students.

The planned steps will significantly improve the position of our country in the global academic arena and will contribute to enhancing its global competitiveness.

I am convinced that our University is able to achieve all the stated plans, and that large-scale significant achievements will await.

I wish you success and achievement of all your goals!



Nursultan Nazarbayev
Chair of the Supreme Board of Trustees

ACKNOWLEDGEMENTS

Many people contributed to the preparation of this strategy. Of note are Aray Saniyazova and Marina Kishkentayeva.

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NAZARBAYEV
UNIVERSITY

CREATING KAZAKHSTAN'S FUTURE ONE GRADUATE AT A TIME

1. INTRODUCTION

Since declaring its independence on December 16th, 1991, Kazakhstan under the guidance of President Nursultan Nazarbayev has undertaken many bold higher education projects – beginning with the establishment of the Bolashak scholarship program in 1993 which has to date sent more than 12,000 of Kazakhstan’s brightest young scholars to top universities around the world.

In 2006, President Nazarbayev and his government began to consider how the country could strengthen its national university program: one answer – to create a world-class English language university in Astana, the nation’s new capital.

Thus, the concept of Nazarbayev University (NU) was born. President Nazarbayev always saw the NU project as more than an education project. As he said in his speech announcing the launch of the project to establish the University in September 2009:

“Creation of the new university is the most important national project... [This project] will have a significant impact on many Kazakhstanis and the development of a backbone for our state. I believe that the new university... should be created as a national brand, harmoniously combining Kazakhstani identity with the best international educational and scientific practice.” The elements of this statement present a clear picture of what the President wanted NU to be: a Kazakhstan institution that achieves the highest international standards; a leader in the future development of the world and the country.

By August 2018, NU had witnessed four graduations comprising 2617 graduates, including 1814 undergraduates and 803 Master and Ph. D. degrees. NU will soon enter its second decade and as is

nearing the end of the period covered by its first strategy¹ (2013–2020), making this a good time to step back and think about its future. This strategy focuses on critical themes and issues for the future; a future that will have as priorities NU’s research and innovation efforts, especially but not exclusively in the STEM disciplines. NU will develop details of implementation plans and the specifics of programs to address issues raised once NU’s Supreme Board has approved this overall strategy.

Although NU is a work-in-progress, it has come a long way since its doors officially opened in June 2010.

TODAY’S NAZARBAYEV UNIVERSITY

Today NU counts more than 4800 students (757 Foundation Year students, 2,962 Bachelor students; 894 Master students; 128 Ph.D. candidates, and 95 Doctor of Medicine students) with a near perfect gender balance (Figure 1 below).

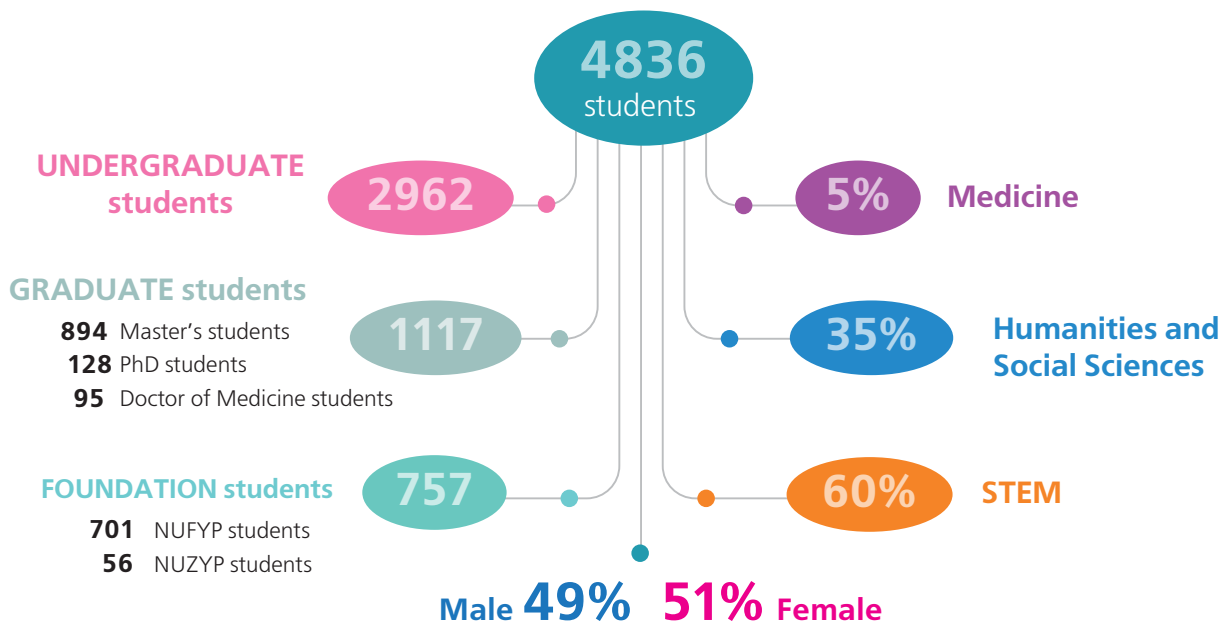


Figure 1. Snapshot of students (as of September 30, 2018)

It has 470 faculty and more than 400 faculty and NLA researchers carry out research. As of September 30, NU’s faculty, drawn from 55 countries, is truly international as shown in Figure 2 below.

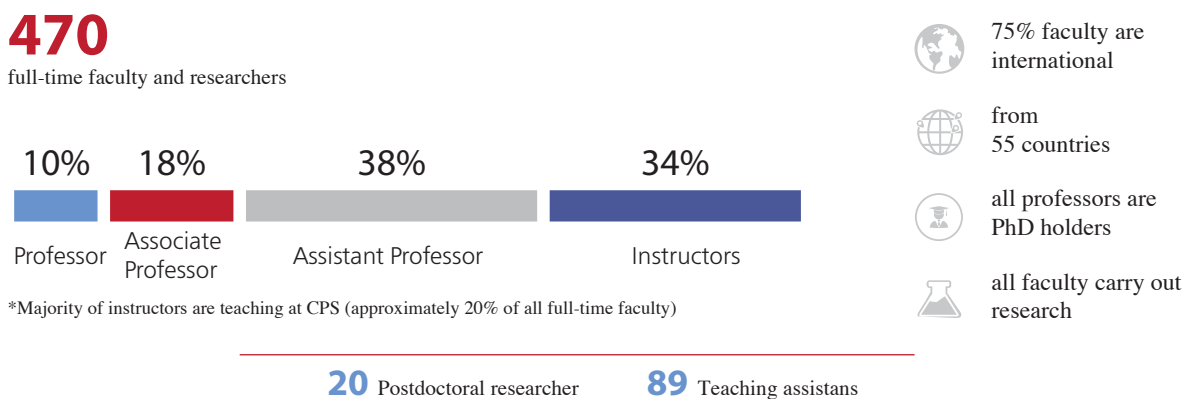


Figure 2. NU Faculty Composition (as of September 30, 2018)

¹ NU’s Strategy 2020 is listed on NU’s website nu.edu.kz

NU has five schools that offer both undergraduate and graduate programs and three professional schools, all supported by partner universities drawn from the world's best universities. See Table 1 below for the list of NU's Schools. Appendix A gives Key elements of unit strategies.

Table 1. NU Schools (Fall 2018)

| Undergraduate and Graduate Programs | Degrees offered |
|--|---|
| School of Engineering | BSc, MSc, Ph. D. (jointly with SST) |
| School of Humanities and Social Sciences | BA, MA, Ph. D. (starting fall 2019) |
| School of Medicine | BA (Nursing), MSs, MD |
| School of Mining and Geosciences | MSc, BSc |
| School of Science and Technology | BSc, MSc, Ph. D. (jointly with SEng) |
| Graduate Programs only | Degrees offered |
| Graduate School of Business | FT-MBA, E-MBA, MSc, Ph. D. (in 2019) |
| Graduate School of Education | MA, MSc, PhD |
| Graduate School of Public Policy | MPP, MPA, PhD |
| Preparatory Programs | Certificates |
| 1 Year Foundation Program | Successful completion paves the way for enrolment at NU's undergraduate program |
| Zero-Year Program for Master Studies | Conditional Admission to NU's Master level programs |

Entering into strategic partnerships with top international universities has played a vital role in jumpstarting NU's institutional development. Each School chose a different partner. This diversity has made for a sometimes challenging but overall, rich learning experience. Table 2 below gives the initial list in alphabetical order of these strategic partnerships. Most of them have endured, some have expired, and in exceptional cases, the mutual fit was simply not there.

Table 2. NU's Strategic Partners (alphabetical order)

| |
|--|
| Cambridge University, Faculty of Education (UK) – Graduate School of Education; Cambridge Assessment – NUFYP |
| iCarnegie (USA) – School of Science and Technology (initial partner for the first three years) |
| Colorado School of Mines (USA) – School of Mining and Geosciences |
| Duke University, Fuqua School of Business (USA) – Graduate School of Business |
| Lawrence Berkeley National Laboratory (USA) – National Laboratory Astana |
| National University of Singapore, Lee Kuan Yew School of Public Policy (Singapore) – Graduate School of Public Policy |
| Oak Ridge Associated Universities (ORAU – USA) – Peer Reviews for internal research grants |
| Pennsylvania University, School of Education (USA) – Graduate School of Education |
| University of Pittsburgh (USA) – School of Medicine |
| Warwick University (UK) – NUFYP (during re-design stage following UCL exit) |
| Wisconsin-Madison University (USA) – School of Humanities and Social Sciences |
| University College London (UK) – NU School of Engineering (for the first 5 years) and NU Foundation Year Program (NUFYP) (for the first 5 years) |

In support of its research, innovation and commercialization agenda, NU has also developed the National Laboratory Astana (NLA) to complement its faculty-driven research programs and an Innovation and Commercialization Cluster including a Technopark and an innovation ecosystem. It is also building the Astana Business Campus (ABC).

NU is today as a young but firmly established institution that produces well-trained graduates who go on to top university graduate programs around the world, get recruited to excellent jobs or become entrepreneurs (for more details, see Chapter 2). However, more is needed if NU is to deliver on the country's original vision for it.

As we discuss below, the core of NU's next phase of growth and development is a vibrant, faculty-driven research program. NU already has a good start in developing such a program with more than 500 faculty and researchers, who have produced approximately 2000 international publications in the period 2011–2018. NU faculty and researchers published three-quarters of their publications in collaboration with international partners. NU's students were also successful in publications, publishing over 130 articles. More than 11% of NU's publications are among the top 10% of the most widely cited publications worldwide, and top journals have published more than one-quarter of NU's research output.

INDEPENDENT EXTERNAL EVALUATION (2017)

In its continuing efforts to improve NU's quality and impact, in late 2016 NU engaged in an internal review process under the guidance of the European University Association's (EUA) Institutional Evaluation Program (IEP). In the first half of 2017, the EUA conducted its independent

evaluation and published its Evaluation Report in August 2017. The report lauded NU's efforts to date and the tremendous distance it has come in a short time. It then offered 29 recommendations designed to take NU to the next level of global competitiveness. Appendix B Summaries the IEP recommendation Most of their recommendations aligned with deliberations that started between NU administrators, faculty and researchers. NU has established working groups to follow up on the EUA recommendations. The EUA will return to NU on a regular basis to review implementation progress and discuss further steps with NU's leadership team.

THE MOTIVATION FOR THE NEW STRATEGY 2018–2030

Considering that NU started out as a greenfield operation just nine years ago, there is much for which the NU community can be proud. However, NU is still growing and working to become the university President Nazarbayev envisioned when he launched the project. While preserving continuity and quality it must always be willing to embrace disruptive change. NU also will continue to grow, doubling its student body to 8,000 students by 2025.

The rationale for preparing this strategy before the end of the current strategy is to emphasize the need for continuity while also preparing for change that will inevitably be imposed by disruptive technologies and unknown futures. Building a strong, world-class institution takes time, and continuity is essential.

NU's commitment to research and innovation is a key direction that will dominate its next strategic period. NU has as its goal to join the ranks of world-class research universities. To do so will require becoming known for at least a small number of top-notch research areas. NU will strengthen the links between teaching, research, innovation and eventual commercialization so that they become seamless. This transformation will be fundamental to fulfilling the vision that President Nazarbayev has for NU.

INSTRUCTIONS FROM THE JUNE 2017 MEETING OF THE SUPREME BOARD OF TRUSTEES

NU's Supreme Board of Trustees at its June 2017 meeting requested and provided guidance for a new strategy to cover the period 2018–2030. At that meeting, seven specific tasks were spelled out. Table 3 below presents these guidelines and a brief indication of NU's proposals for fulfilling them. The 2018–2030 Strategy expands on these points below.

Table 3. Tasks from the June 2017 Supreme Board Meeting and NU Response

| № | Task | Response |
|----------|---|--|
| 1. | To search for and attract talented students and young researchers from abroad. | Intensive recruitment program for both students and faculty. Establishment of a Board sub-committee on Internationalization. Launch Satellite Offices to support this task. |
| 2. | To make suggestions about the increase in the student number from foreign countries at Nazarbayev University in 5 years, up to 10% out of the overall number of students. | A commitment to increase the overall percentage of international students from the current less than one percent to 9–10% by 2025 and 12% by 2030. A plan has been prepared and discussed by the Internationalization Sub-Committee under the Board of Trustees. |
| 3. | To expand international collaboration, continue to exchange experiences with the strategic partners, at the same time maintaining and developing own uniqueness. | Shift partnerships toward a model with deeper collaboration between NU's faculty and Partners' faculties and promote students exchange. Use the annual partners' meetings to make this happen. |

| № | Task | Response |
|----|---|--|
| 4. | To take measures to create an ecosystem to support innovation. To provide systemic support such as consultations, startup capital, premises, marketing and legal support for young researchers who have ideas and technologies. | NU has worked to set up an entire ecosystem to support innovation and commercialization based on the fruits of NU's research. A one-stop shop for young/ first-time entrepreneurs is in place. |
| 5. | To create a department at AOE Nazarbayev University to promote research and commercialization of research and innovation projects in Kazakhstan and abroad. | NU has established a Research Support. Department under the Provost's Office to serve NU faculty and researchers, and an innovation and commercialization office under the NURIS Private Entity. |
| 6. | To create research centers at AOE Nazarbayev University and attract star professors, prominent researchers, and increase the number of postdocs and research assistants. | <p>NU has submitted a request to Government increase annual research funding to NU to support both distinguished international researchers and NU's top researchers. This request is consistent with the need for Kazakhstan to substantially increase its investment in R&D to get closer to OECD levels. NU will compete for its share of this increased research pie.</p> <p>Also, NU has agreed with Samruk-Kazyna (S-K) to have S-K to provide financial support for research, in addition to supporting NU's Graduate School of Business NU.</p> <p>Management gratefully acknowledges that part of the Nazarbayev Fund's interest income now has started to fund research related activities at the university.</p> |
| 7. | To consider in the long-term strategy to increase students' number to eight thousand students. | A plan has been developed to meet this goal by 2025 while maintaining NU's rigorous quality standards. |

We have organized this document as follows:

Chapter 2 reviews the early achievements and lessons learned during the first Strategy period. NU's achievements in its first ten years create a strong foundation for this strategy.

Chapter 3 describes ongoing initiatives. In addition to preserving continuity with its past, NU's future also must be consistent with the evolving and emerging future of universities globally as well as in the Republic of Kazakhstan.

Trends shaping the future of the world's universities are discussed briefly in Chapters 4.

With these pieces in place, Chapter 5 takes a closer look at NU's vision, mission, core values, and strategic goals. Chapter 6 gives commitments for the two sub-periods of this strategy and proposes some core metrics.

Chapters 7 and 8 reviews two main tasks for the NU Community: namely to strengthen the sense of unity among the various members of the community, and to emphasize the synthesis needed to ensure that the whole will always be greater than the sum of its parts. Chapter 9 then discusses the challenges that NU will face if it is to succeed in implementing this strategy, and Chapter 10 concludes with a call to move from aspiration to reality, including a review of next steps in implementing this strategy.

2. EARLY ACHIEVEMENTS AND LESSONS

INSTITUTIONAL OUTCOMES

At the institutional level, NU achieved many “firsts” for Kazakhstan in the past eight years.

As NU President Shigeo Katsu said in a May 2017 presentation on NU’s early achievements:

- “The translation and transmission of “best practices” from Western universities, and NU’s strictly merit-based approach has meant that:
 - NU attracts the best minds and talents in the country;
 - NU functions as a social lift for poor, but talented young people;
 - The wider society embraces the NU model;
 - The International community accepts NU as a real example of efforts to modernize the country.”

However, he ended on a note of caution:

- “NU today is recognized as a very good “teaching university,” itself already an achievement, but the work is only 1/3 done.”

At this point, NU’s primary product is its graduates, with research a critical independent output and input into the quality of its teaching program. While the track record on these fronts is short, a mere eight years and four graduating classes, it is nonetheless encouraging. For more about NU’s past results, see its website at nu.edu.kz. Nevertheless, NU’s primary product is its graduates.



We must put the following statistics on NU’s graduates in context. These young people graduated from a university, which did not exist nine years ago. The university undoubtedly benefited from the success of the Bolashak program that put Kazakhstan on the educational map. Nevertheless, the fact that the world’s top graduate programs have admitted so many NU graduates attests to both the quality of NU’s programs and the quality of its early cohorts of students.

STUDENT SUCCESSES

NU’s first four graduating classes have done well, whether they chose to pursue additional education or enter the job market. Of the 2617 graduates in these four classes, roughly, one third chose to pursue further education, and two-thirds sought employment. Looking at only the Bachelor’ graduates, about half of them have enrolled in graduate studies, many of them abroad.

GRADUATE STUDIES

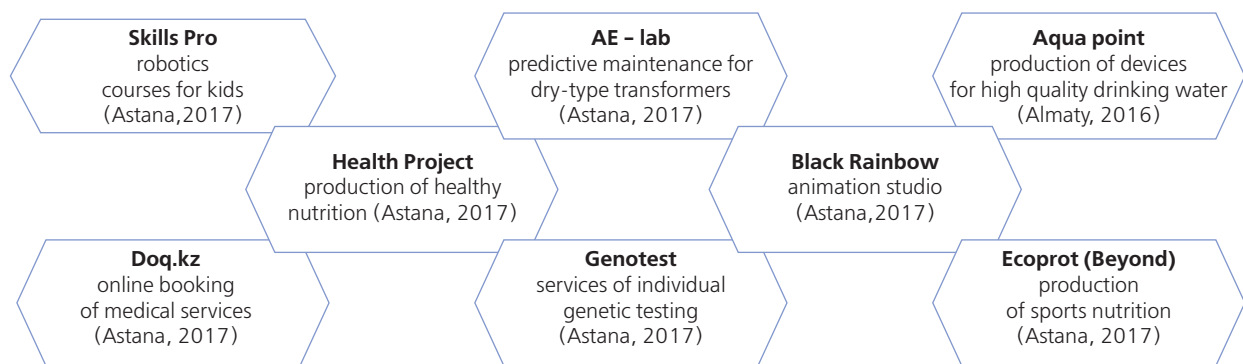
Cumulatively, more than 600 graduates chose to pursue additional education. Most went to top schools around the world (USA, UK, Germany, and France were the leading recipient countries after NU).

The majority entered master programs, but a significant number are pursuing Ph. D. or Ph. D./ Master programs or Doctor of Medicine programs. Of these, a little less than half chose to study abroad, and slightly more than half chose to study at NU.

As one example, NU’s first 2015 Valedictorian, a woman graduate in Chemistry, was accepted in Stanford’s and Princeton’s Ph. D. programs and MIT’s master program. She was one of only seven MIT applicants to its MS program to receive a full scholarship to MIT; she completed her MIT Masters in a year and went on to study for her Ph. D. at Stanford.

STARTUPS BY NU GRADUATES

Several of NU’s early graduates also set up new companies, this even before NU became serious about supporting innovation and entrepreneurship. See the accompanying Figure 3.



Source: NU Career Advising Center, as of 20 June 2018

Figure 3. Examples of startups launched by NU graduates

These students are leading the way in an area critical to NU’s contribution to Kazakhstan’s future: Developing new businesses that contribute to the diversification challenge by providing citizens with new jobs. Several of these startups also illustrate how NU students can “give back” to their country for the gift of education that the country has given them, by setting up socially oriented NGOs.

EMPLOYMENT

Regarding the country’s economic diversification agenda, it is noteworthy that less than one-fifth of those seeking employment ended up in the manufacturing and production. The single largest employment categories were Consulting, Audit and Banking and Education and Science. As of 2018, approximately 50 percent of NU graduates with bachelor’s degrees choose to seek employment on graduation, 80+ percent of those with master’s degrees did so.

One important side benefit of NU’s merit-based admissions and graduation policies is the near perfect gender balance among its students even in the STEM disciplines – of NU’s five top students in its first graduating class, four were women, and two of those were STEM graduates.

RESEARCH AND INNOVATION

As Figure 4 indicates, NU’s research and innovation records are already admirable.



Figure 4. NU Research Outputs 2011–2018

With more than 400 researchers, publications increased rapidly (cumulatively approaching the threshold of 2000; with 11.7% in the top 10% of most cited publications worldwide (Kazakhstan average 4.0%); with field-weighted citation impact 1.17 vs. global average 1.00 (as of August 2018).

In comparison, Kazakhstan’s other higher education institutions average citation impact is less than 0.6. And, when compared with the leading universities within the Commonwealth of Independent States (CIS), NU already occupies the 4th place, and when compared with the leading universities of the post-2004 EU accession countries, NU is in 14th place. These outcomes are true even though we have just started. NU also ranks as the most cited research institution in Kazakhstan, according to Thomson Reuters.

Figure 5 below shows where NU falls regarding field-weighted citations and international collaboration relative to comparator groups.

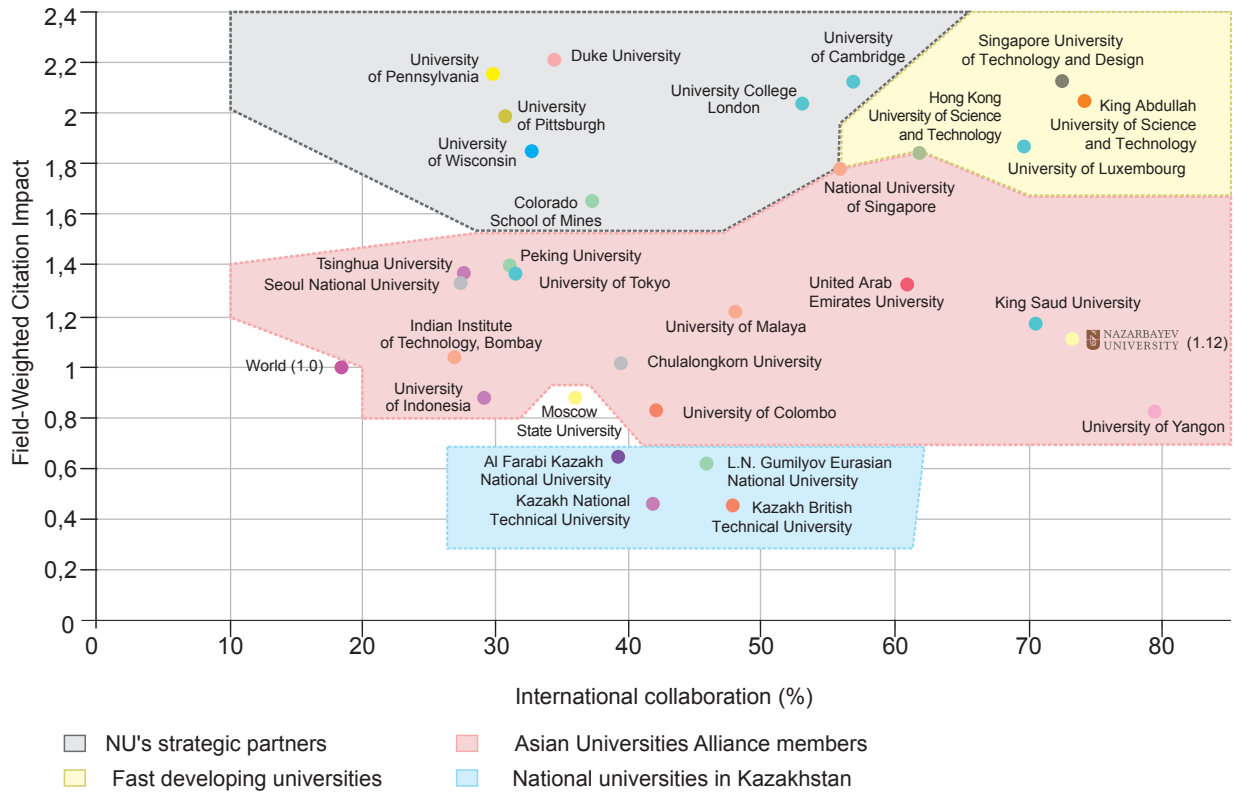


Figure 5. Research Output 2012–2018: Field-weighted Citation

NU faculty and researchers are moving on the innovation front as well, with 63 patent applications, and more than 40 actual patents received.

These are good numbers for any university, let alone one that started a mere eight years ago. The Evaluation report of the EUA report (see NU’s website at nu.edu.kz) states:

“The team commends NU for the high quality of its students and academic staff. The latter, who is predominantly foreigners, is dedicated to the success of what they see as an interesting project, i.e., contributing to a national experiment. The publication list NU provided is impressive, and the staff output emanates not only from their previous positions but includes research carried out at NU. The quality of NU’s partners, some listed above, speak for the quality of the academic staff recruited partially through them.”

LESSONS FROM NU'S FIRST STRATEGIC PERIOD

At the foundation of these early achievements are a host of factors and actors, but the following stand out:

1. The President's decision to make English – the language of international research – NU's language of instruction has been critical to its success;
2. The Supreme Board's guidance in the form of the initial five strategic goals helped NU focus in its early years;
3. Instilling in NU's students the best of global values regarding ethics, academic integrity, individual responsibility, and critical thinking has been very important;
4. As the international development community knows, country ownership is essential to successful institutional development – in NU's case, from the origin of the concept to initial implementation, NU was a truly national (Kazakhstani) project. It remains so today;
5. Early in its work, the original implementation team understood the need to distinguish NU from Kazakhstan's previous efforts to develop “world class” universities. Important in this regard was the passage of a special law giving NU academic and institutional autonomy. In turn, this autonomy allowed NU to aggressively pursue global governance standards and merit-based admissions and hiring policies. It also allowed the creation of a Board of Trustees with international and national members;
6. NU's admission policies built on the principle of merit. Contracting out the admissions to NU's entry-level foundation program (the Center for Preparatory Studies) to the University College of London (UCL), one of the strategic partners set the tone. This admissions process sent a strong signal to the citizens of Kazakhstan that NU was different. The message relayed was that NU was a university for all; any student, regardless of wealth, connections (or lack thereof), ethnicity or gender with sufficient academic achievements – and level of English – could and would be admitted to NU;
7. The composition of NU's student body reflects the importance of this admissions policy as it is representative of all the country's socioeconomic, gender, and geographical groupings (Figure 4). NU's admissions policies also produced a near perfect gender distribution among students (see Figure 1 above);
8. NU's early decision to reject a “branch campus” approach to its relationships with the strategic partners was also critical, allowing NU to develop its independent brand and contributing to its long-term sustainability;
9. NU's initial strategic partners, drawn from the ranks of the world's best universities, played a crucial role during NU's start-up period. NU's partners gave NU the ability to develop more rapidly than would have been the case without them while signaling as well that NU was serious about quality;
10. EUA's review of NU was an important input into NU's constant efforts at self-improvement.

3. ONGOING INITIATIVES

After eight years, NU is still a work in progress. Recently launched initiatives include, but are not limited to:

1. NU's Provost's office is developing a new research strategy, which emphasizes the need for cross-disciplinary research and the need for NU to focus its research resources on a manageable number of priority areas;
2. Internationalization although internationalization remains a core goal for NU's second decade; work is already underway on that front (see appendix C). NU's Board of Trustees has established a subcommittee on Internationalization and NU's VP for Student Affairs, International Cooperation; Government Relations has already launched a program to identify good practice on internationalization in other university settings;
3. Learning and Teaching Strategy: The NU Learning and Teaching Strategy set out the university's approach to learning and teaching. The strategy focuses on the themes of Innovation, Integration, and Inclusion, and NU links it to the goal of academic excellence and the NU Graduate Attributes. It advocates academic integrity, research-integrated teaching, inquiry-based learning, collaborative learning, technology-competent learning and internationally-connected learning;
4. NU's quality enhancement plan: NU bases its University Quality Enhancement Plan (NUQEP) on an analysis of student and faculty feedback, external examiners' comments, data on student progression and performance at the course, program and School levels, and reflections on the progress made towards implementing the previous action plan. The NUQEP sets new targets and identifies existing good practices for dissemination among NU Schools;
5. The development of a core curriculum that all first and second-year students will take allows them the time to explore interests and discover intellectual passions before they must choose a major. The core curriculum integrates insights from NU's teaching and learning strategy along with entrepreneurial and design thinking;
6. Institutional Research Activities: IR carries out analytical and research activities to support decision-making and institutional planning at NU. Its main objective is to produce statistical analyses that address issues of importance to Nazarbayev University. These have included studies of grade distributions across Schools, NU students' standard of English (from NUFYP through the Undergraduate program), the academic performance of direct-admitted students and surveys of NU students conducted at entry and on exit;
7. Also, as mentioned, NU has engaged in European University Association's (EUA) Institutional Evaluation Program (IEP) to obtain an external, independent view of its progress. The results of this review are being absorbed and acted on by NU's management. Appendix B summarizes the IEP recommendations;
8. Per the Supreme Board's mandate, NU has established a plan to double its student population by 2025;
9. Green Campus Initiative: As its concept note states, the Green Campus concept will serve as the basis for building NU's Environmental Policy and create a sustainable culture within its community. The introduction of the Green Campus concept by NU will be a pilot project, which other Kazakhstani institutions can replicate;
10. The development of an innovation ecosystem to support NU's current and future innovation efforts.
11. At the Governments request, NU leadership is exploring how best to establish a new IT University on the site of the International Expo.

4. CONTEXT – THE FUTURE OF UNIVERSITIES²

How will the purpose of universities change in the coming decades, and how will the way universities deliver their evolving product change?

Regardless of the future scenario one favors for the world or Kazakhstan; certain inevitable trends are likely to affect universities in the future. Among these are:

- Increased global competition among universities will raise the need for universities to distinguish their educational product from the pack;
- Continuing digital revolution and globalization will be increasingly disruptive of conventional labor markets and employment;
- The digital revolution will also change the way universities operate; how they teach and are organized.

Thus, universities in the next several decades are likely to face at least two challenges:

- Staying competitive and relevant in a labor market environment characterized by rapidly shifting demands for skills as technology and robotics replace jobs with code and machines (see Boston Consulting Group’s **Man and Machine in Industry 4.0**³), and trade and globalization redistributes of jobs among countries⁴.
- Adapting to the ongoing digital revolution in the way universities operate (mixed delivery of materials, digital classrooms, etc.).

The labor market changes point to a dramatic increase in the need for and desire of older workers to seek new skills during their working lives. Many future universities will no longer be places dominated by young people just out of high school—they will be a mix of ages as countries struggle to retrain workers left without jobs because of technological change and globalization.

*The university experience will change dramatically in the period covered by this strategy.
NU needs to maintain the flexibility to adapt to these changes.*

All these trends will affect Kazakhstan’s higher education system as well, although how is beyond the scope of this strategy (but see Appendix C for a summary of the government’s current thinking). However, the need to adapt to massive changes in (market) demand for skills is likely to be even greater in Kazakhstan than for the rest of the world as it seeks to diversify its economy to achieve the vision of Strategy 2050.

² See Ernst and Young’s 2012 report on “**University of the future: A thousand-year-old industry on the cusp of profound change**” for a similar set of ideas. See also The Economist, “The staid higher-education business is about to experience a welcome earthquake” Jun 28th, 2014 and Zogby Analytics, 2014 Global Survey of Students” June 2014.

³ Boston Consulting Group, **Man and Machine in Industry 4.0**, September 2015.

⁴ See also Bakhshi et al, *The Future of Skills, Employment in 2030*, London, Pearson and Nesta, 2017; and *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*. World Economic Forum, January 2016.

5. THE VISION, MISSION AND STRATEGIC GOALS OF NU

Regarding the country's desire for NU, one can glean several elements in the Head of State's remarks launching NU and from subsequent public statements. NU is to be a top university globally and a national "brand." Its graduates will lead the country's modernization efforts and will be in the forefront of efforts to implement the vision set out in Kazakhstan 2050.

To achieve these strategic goals, it will need to be more than a pure teaching and research university; it will need to promote innovation and entrepreneurship, which will underpin the diversification of Kazakhstan's economy. NU will encounter many barriers to moving in this direction, which implies taking risks and moving into territory unfamiliar to the country in the face of growing competition for public resources.

These goals – global preeminence and national relevance – are not at odds with each other and can be mutually reinforcing. However, to ensure this mutual reinforcement, NU in the coming decades needs to pursue these objectives in a complementary manner.

International recognition –requires playing by existing global rules – in other words, competing effectively in the global ranking "League Tables" game. That competition is driven primarily, but not exclusively, by a university's research and publishing track record, but also by student achievements and university characteristics (for example, student-professor ratios, the diversity of the student body, etc.). The timing of when NU enters the global competition needs to be carefully considered, as entering too early could "typecast" NU in the lower ranks of global universities, a designation which could be difficult to shed. NU, therefore, does not expect to seek global ranking until late in this strategic period, toward 2030.

In the meantime, NU will analyze the characteristics of the top 200 universities to document what is realistic and feasible on the ranking front. However, NU's future should not be directed exclusively at achieving high positions in the Global League tables. As President Nazarbayev commented, NU must serve the people of Kazakhstan as they seek to develop themselves and modernize their country. This point was made as well in NU's 2020 strategy.

To drive and guide the journey to 2050, NU will incentivize its faculty to apply their research to both critical global issues and Kazakhstan's socio-economic as well as science and technological challenges.

Combining these attributes in a single institution and achieving success in a short time frame will require a continued strong sense of common purpose, a strong and diverse leadership team, and a clear sense of how this amalgamation will look. It will also need a focus on what NU will want to be known for in the future (its brand).

As mentioned earlier, NU must distinguish itself from the university "pack." To do this, NU must develop globally recognized expertise in a manageable number of spheres. Based on NU's current configuration and relative strengths, among the possible areas of future emphasis (shown in Figure 6):

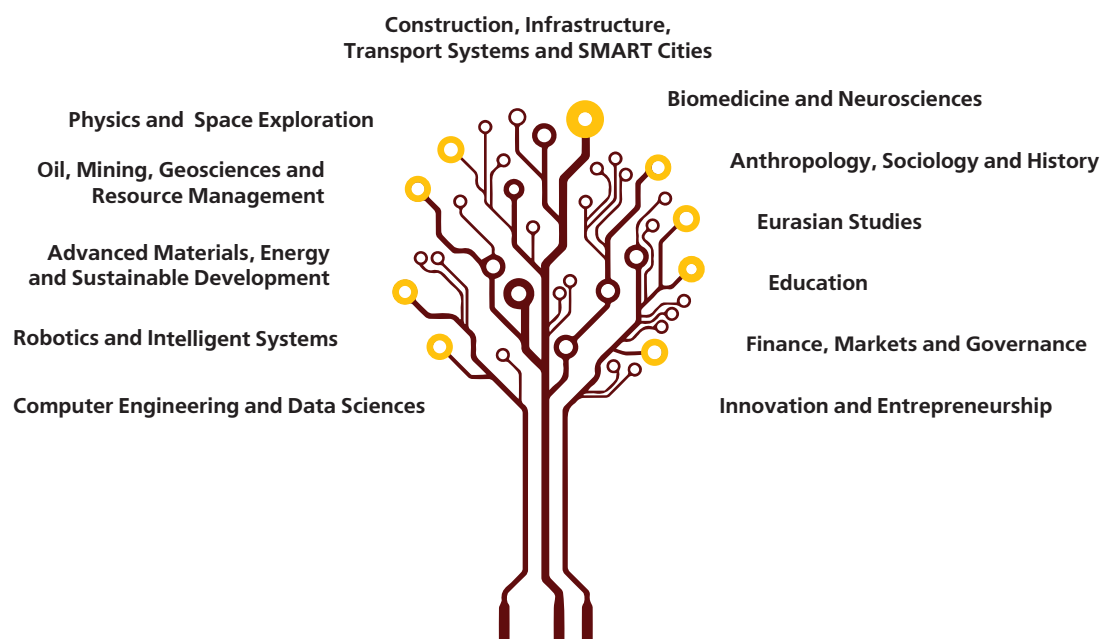


Figure 6. Possible Future areas of Research Emphasis

CORE VALUES

To continue its journey to global recognition, the NU of the future must also hold true to its core values:

For the university these are:

- Research – driven by intellectual curiosity – seeking local and global impact;
- Embracing diversity – integrated into every aspect of education, research, and community;
- Equal access to education – regardless of race, religion, gender, physical capacity, or socioeconomic status;
- Merit-based institution open to all talented and bright students, faculty and researchers;
- Instilling Integrity in teaching, administration, and student life;
- Professionalism and high ethical principles for students, faculty, and researchers;
- Transparency and openness, public access to all aspects of university operations.

For graduates these are:

- Possess an in-depth and sophisticated understanding of their domain of study;
- Be intellectually agile, curious, creative, and open-minded;
- Be thoughtful decision-makers who know how to involve others;
- Be entrepreneurial, self-propelling and able to create new opportunities;
- Be fluent and nuanced communicators across languages and cultures;
- Be cultured citizens of the world who embrace diversity;
- Demonstrate high personal integrity;
- Be prepared to take a leading role in the development of their country.

STRATEGIC GOALS

NU's Supreme Board gave NU five original, overarching strategic goals:

1. Education reform leadership;
2. Academic Excellence;
3. Research excellence;
4. Creating a model for health care services;
5. Innovation and translating research into production.

The table below (see Table 4) looks at the evolution of these strategic goals over this strategy period:

EVOLUTION OF NU VISION, MISSION, AND STRATEGIC GOALS

Table 4. Evolution of NU Strategic Goals

| 2018 | 2024/25 | 2025/to/2030 |
|--|---|---|
| Vision To give Kazakhstan and the world the scientists, academics, managers, and entrepreneurs needed to prosper and develop | The vision will continue | The vision will still be valid but carried to ever higher standards |
| Mission To be a model for higher education reform and modern research; to contribute to the establishment of Astana as an international knowledge, innovation, and medical hub; and to prepare students for a world of increased volatility, uncertainty, complexity, and ambiguity. | The mission will continue, but with increased integration with Kazakhstan's wider university system, especially Astana's other centers of learning. | The mission will continue to demand education leadership and emphasize life-long Learning; |
| Strategic Goal 1: Higher Education Reform Leadership To stay | Yes, and continue to innovate the 'hub and spokes' model with increased two-way flows between NU and Kazakhstan's other national and regional universities. | Build a network of equals where NU would assist other universities to catch up, and thus create a fully integrated higher education system; further, strengthen NU's regional leadership role. |

| 2018 | 2024/25 | 2025/to/2030 |
|--|---|---|
| Strategic Goal 2: Academic Excellence To stay | Yes, and always move to higher standards; increased role in making Astana a center of academic excellence. | Yes, and ensure that NU academic performance puts it in the top 200 global universities. |
| Strategic Goal 3: Research Excellence To stay | Yes, and intensify focus on subjects important to the world and Kazakhstan; move up the citation-impact index | Intensify and move further up the citation index and increase connections with top research centers around the world. |
| Strategic Goal 4: A model for creating healthcare services To stay | Fully established IMHC – link up with the whole of NU and not just the School of Medicine. | Assess the workings of the IAHC and help the government implement it across RK. |
| Strategic Goal 5: Innovation and translation of research into production To stay | Vibrant commercialization phase; pilot new ABC site. | Reassess innovation ecosystem and intensify commercialization. |
| New Strategic Goals: NU will take an in-depth look in consultation with the Supreme Board. | Review progress toward 2050 goals and determine strategic goals for the period to 2030. | Scan for new strategic goals for the future. |

While the original five goals will remain in effect at least until 2024/2025, their relative weights in NU’s resource allocation and management focus are likely to change. Over time, NU may shift emphasis from the first strategic goal – Educational Reform Leadership to the third and fifth strategic goal, Research Excellence and Innovation and Translating Research into Innovation and Production. Educational reform leadership and health care and innovation will remain important; so, this shift is a matter of emphasis, not dropping some goals in favor of others.

Below we review NU’s five primary strategic goals and consider how each may change in the coming six years (the first half of the strategy period). By 2025, it is likely that events in Kazakhstan and the World will require NU to rethink its strategic goals. The next sections discuss general directions for the five strategic goals up to 2025.

EDUCATION REFORM LEADERSHIP

At least until 2025, NU is likely to remain a unique institution within the Kazakhstan university system. A key challenge for NU in its outreach to the country’s higher education institutions will be to tailor its advice to their realities (for example, resource constraints). By 2030 Kazakhstan may have other institutions that will start to resemble NU. If and when this happens, NU will need to rethink its role regarding Kazakhstan’s university system.

In responding to the mandate of higher education reform leadership, technology will play a key role. For the first half of this strategy period, a hub and spoke model (see Figure 7) with NU at the hub will link Kazakhstan’s universities in a “web of knowledge.” The development of this web is already happening in part through the various training courses and professional development programs that NU offers to leadership and staff of other universities. Linking Kazakhstan’s universities ultimately in a network of universities of (almost) equal standing will also facilitate student mobility within the country and as an extension, international student mobility as well, an increasingly interesting model for many countries. As Kazakhstan’s university system matures, this web of knowledge will look more like as shown in Figure 7.



Figure 7. Conceptual Illustration: Relationship of NU and other Kazakhstani Universities as well as Regional (i.e. Central Asian) Universities

To achieve these goals, NU will need to be selective in the lessons it chooses to pass on to the rest of the higher education system. What it means to implement principles of academic freedom; how to make internationally accepted standards of university governance, including the concept of shared governance work in the Kazakhstan context. Merit-based admissions policies; instilling academic integrity, and critical thinking skills in students, are examples of lessons relevant to the country’s entire higher education system, but there will be many more. NU’s mandate to help the government establish a new IT University in Astana will serve as testing ground for what can and what cannot be transferred to the rest of Kazakhstan’s universities.

ACADEMIC AND RESEARCH EXCELLENCE

Academic and research excellence are the foundations of all great universities. NU’s faculty and researchers must continue to demonstrate their ability to achieve high global standards in these, the university’s core businesses. As mentioned earlier, the EUA evaluation team commended NU on the quality of both its students and its faculty.

As NU’s newness wears off over time, the world will be increasingly demanding of NU to demonstrate that it measures up to global standards. Therefore, continued growth in the quality and success of its graduates and its research will be critical in achieving international recognition and standing.

Concerning academic excellence, NU’s challenge will be to imbue in graduates the ability to both work in today’s Kazakhstan and to shape tomorrow’s environment as they contribute to modernizing society and to achieving the vision of Kazakhstan 2050. While employers of NU graduates have indicated how much they value NU’s graduate’s ability to think critically and to solve problems along with theory, they have emphasized that applied knowledge is important as well.

On the research front, NU will increasingly face the challenge to achieve a critical mass in a manageable number of research areas while strengthening the link between research and innovation,

and between these and commercialization. To this end, NU is in the process of strengthening its research support services to NU researchers and students, and further increase collaborations with centers of research excellence around the world.

CREATING A MODEL FOR HEALTHCARE SERVICES

NU's health and biomedical programs will increasingly be called upon to lead Kazakhstan's health system reforms, implying a continuous close relationship between these programs and the Ministry of Health (MoH). NU's School of Medicine (SoM) is already a model for Kazakhstan's other medical schools. Beyond training world-class doctors and nurses, NU will work with the MoH on modernizing Kazakhstan's health delivery system.

There is one issue of concern: unless solutions are found to raise medical compensation levels by the time SoM graduates medical doctors and nurses of global standards, the country may have difficulty retaining them given the global competition for these two groups. A recent report in the Kazakhstan Youth Educational Portal discussing the ranking of occupations by salaries states that: "...medicine ... remains one of the lowest paid sectors [in Kazakhstan]." This status of the medical profession in Kazakhstan is in sharp contrast to the earnings status of medicine in other parts of the world.

By 2025, NU's health and biomedical programs should be a fully functioning integrated academic health care system (IAHCS). A fully functioning IAHCS will link up not only with SoM and the University Medical Center (UMC) but also with the other NU schools and research centers.

INNOVATION AND TRANSLATING RESEARCH INTO PRODUCTION

Of all the challenges facing NU in the years to come, delivering on its innovation agenda will be close to the top of the list both in importance and challenges. It will require continuing to instill in NU students and other young people a willingness to take smart risks, and even occasionally to fail. Having competed successfully to enter the university, NU students are vulnerable to the concept of failing. Convincing them that this is possibly true academically but does not apply to innovation or entrepreneurship will require constant guidance by NU's faculty and staff. Figure 8 below schematizes the core elements of NU's innovation cluster.

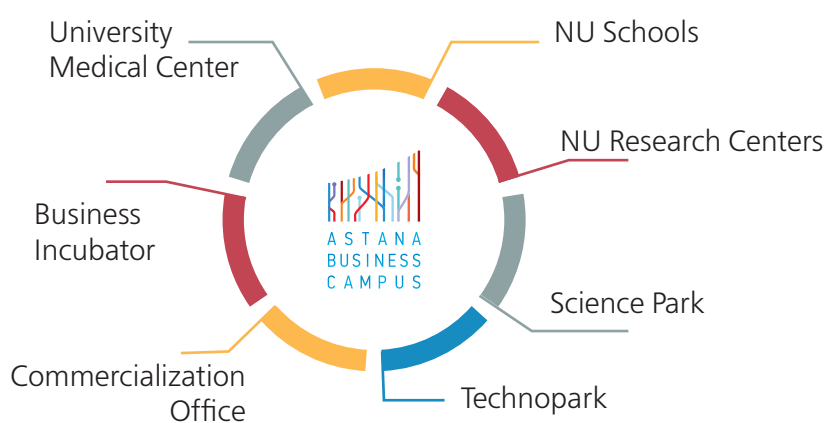


Figure 8. Innovation Ecosystem.

NU has established almost all the elements of the cluster. The one building block as yet missing is the physical realization of NU's science park, that is, the Astana Business Campus (ABC). While its design has been prepared, financing the ABC is a challenge. Several options are under consideration ranging from a fully public-funded model to one with extensive private sector (developers) participation.

6. THE FUTURE NU

The table below (see Table 5) provides an overview of NU’s goals for the two sub-periods of this strategy: 2018–2024/25 and 2025–2030.

Table 5. Benchmarks for the two sub-periods of this strategy: 2018–2024/25 and 2025–2030

| Issues | By 2024/2025 | By 2030 |
|--|--|--|
| Students: numbers | Foundation: 500 Undergrad.:5200 MA/MSc: 1900 Ph. D.: 450 Total: 8050 | Up to 10000 |
| Students: internationalization | Undergrad: 5% Graduates: 20% Overall: 9–10% | Undergrad: 10% Grad: 25% Overall: 12–15% |
| Research – demand for research resources will pick up dramatically during this strategy. | Citation impact: >1.6 Budget*: USD250 million per year | Citation impact: >2.0 Budget*: USD500 million per year |
| Accreditation | Program-level accreditation | Institutional accreditation |
| Innovation Commercialization | Complete the ecosystem Testing and developing NU’s commercialization support system | Emulate Cambridge phenomena**. Full-Scale launch of commercialization through ABC |
| Faculty (#) *** | 620 | 770 |
| Facilities | As needed | As needed |
| Budget: size | As needed | As needed |
| Research budget: sources (% govt.) | 80 percent | 70 percent |
| Global ranking | Not to be ranked (too early) | In top 200 |

* Assumes GDP growth of approximately 5% and growth of RK’s R&D expenditures from the current 0.17% of GDP to more than 1% by 2025 and 1.5–1.7% in 2030. In this scenario, NU’s research budget request is not out of line.

** Cambridge is famous for developing a strong commercialization program over a ten-year period starting in 1999.

*** Based on a 13/1 student teacher Ratio. NU will strive to maintain a 10:1 ratio, but to do so will require roughly an additional USD7 million per year. This number does not include foundation year instructors. Optimal faculty-student ratios depend on the way classes are taught including the use of digital classrooms.

Below we explore these indicators in more detail.

BY 2025

NU will gain international recognition as the leading higher education and research institution in emerging markets and Central Asia and one that measures up well against the world's best universities. NU will not seek international ranking during this first half of the new strategy to avoid the ranking system typecasting it before it is fully developed and internationally competitive at the highest levels. Thus, ranking will take place late in this strategy period, toward the 2030 endpoint. A study analyzing the characteristics of the leading 200 international universities will be carried out to help management and the Board understand what is realistic on the ranking front.

NU will also have a substantially larger total student body of about 8000, double today's number.

NU will have a vibrant innovation and entrepreneurial culture that generates significant new inventions. Many successful enterprises will emerge, and the citizens of Kazakhstan and the world will see NU as a center of innovation and a developer of new businesses. NU will intensively partner with industry to commercialize its research results⁵.

NU's medical complex will be a full-fledged integrated medical system which will be at the forefront of the transformation of Kazakhstan's health system. NU's medical school will be producing doctors, nurses, researchers and public health professionals who can compete in a global market on quality grounds; NU's medical system will be producing cutting-edge basic and applied research serving not only the people of Kazakhstan but the world. These attributes will lead to increased medical tourism in Astana, especially from the surrounding region and to the development of new business lines.

BY 2030

NU should be well established among the world's top 200 universities. NU will be a globally recognized center of teaching, research excellence, and innovation.

The ABC will be in full swing. It will be the home of NU's growing list of startups. Kazakhstan's and the region's business leaders will see NU as the first port of call for solutions to their technical and business problems, and as an eager and reliable partner in developing new business lines. NU will support Kazakhstan's bid to be a global leader in mining and other extractive industries.

NU will produce not only the PhDs and scientists that the society needs, but also the inventors and entrepreneurs needed to diversify the country's economy and provide its citizens with jobs, and public-sector policymakers and managers.

By the end of this strategic period, NU graduates will be intellectual, scientific, government, civil society, and business leaders – at the forefront of efforts to shape and build the Kazakhstan described in Kazakhstan 2050, and to advance other societies.

⁵ For some recent successes in university/industry partnerships see: "INDUSTRY-UNIVERSITY PARTNERSHIPS WORK Lessons from successful collaborations," report commissioned by the Science Business Innovation Board AISBL, 2012.

7. STRENGTHENING THE SENSE OF UNITY AMONG NU'S PARTS

In reviewing the strategy statements presented by various NU units (Appendix A gives selected summaries), one of NU's challenges for this upcoming strategic phase will be to strengthen the linkages among NU's parts. At all top universities, the sum is greater than the parts.

By necessity, NU began with attention to its parts: creating new schools and new laboratories. Strategic partners cautioned to avoid at all costs the creation of silos. While the "walls" of NU's silos remain low, they nonetheless exist, and NU is committed to dealing with them.

In the coming decade, the various elements of NU will be pulled together to strengthen the sense of one university and to foster interdisciplinary research⁶. This pulling together could range from restructuring schools to realize efficiency gains to strengthening the incentives for school and labs to collaborate on interdisciplinary research. Another unifying instrument is the core, cross-school curriculum that are implemented in fall 2018.

To achieve NU's full potential, however, efforts at collaboration will have to go beyond structural changes to the development of a culture of cross-unit collaborations. Only then will multidisciplinary research become instinctive.

8. ACCOUNTABILITY

NU has absorbed considerable national resources since its inception. NU should be held accountable for a core set of KPIs (see Table 7) and for steady, year-on-year betterment. Under this strategy, NU would deliver significantly more on all key aspects of the university by 2025, and even more by 2030.

While it is difficult to predict when NU will break into the top 200 universities in global rankings, once NU submits itself to global ranking it is reasonable to expect NU's ranking to improve, maybe not every year, but certainly over five-year periods. The same is true for research publications, and innovations and patents: NU should be held accountable for steady improvement in all these areas. Of course, the primary measure of NU's effectiveness will remain the quality of its graduates.

NU can develop this new system of accountability only through a combination of international and national expertise and through interactions with the Government. Again, the experience of some of NU's strategic partners that are also dependent on state support may be helpful in navigating these difficult waters, for example, the "land grant" universities in The US.

⁶ See "*Facilitating Interdisciplinary Research*", Pages 171–185 Committee on Facilitating Interdisciplinary Research, National Academy of Sciences, National Academy of Engineering, Institute of Medicine, 2005 for idea on organizing universities to promote interdisciplinary research.

9. CHALLENGES

Any country that sets out to build a world-class institution of higher education faces multiple challenges. Jamil Salmi in his **The Challenge of Establishing World-Class Universities** cites 14 potential pitfalls (Appendix E summarizes Salmi’s pitfalls). For the most part, NU in its first eight years has managed to avoid or overcome those pitfalls. However, they still serve as a good reminder of what to beware of moving forward, just as new challenges are emerging.

NU’S CHALLENGES IN THIS STRATEGY PERIOD

NU senior management undertook a “SWOT” (Strengths, Weaknesses, Opportunities, and Threats) analysis to determine the scope of NU’s future challenges. The results of this analysis are presented in Appendix A.

Growth – Plans call for a doubling of NU’s student body from the current roughly 4000 students to 8000 students by 2025. This planned growth will present many challenges including ensuring that NU’s faculty, staff, and facilities keep pace; and especially adherence to NU’s merit-based admissions policies and emphasis on quality over quantity.

Reach – Since the breakup of the Soviet Union, Kazakhstan has provided Central Asia and other former Soviet states with a model of economic progress, stability, and globalization.

Increasingly NU will have to clarify its regional aspirations as Central Asia is changing rapidly and is also growing in global and geopolitical importance. Kazakhstan and NU are in a strong position to lead and influence this change. What should NU do with support from the Government to play a stronger regional role, especially considering the competition from other regional universities? NU’s membership in the Asian Universities Alliance is a step in achieving this goal, but follow-up will be important. Some NU Schools such as the Graduate School of Public Policy (GSPP) have already started to reach out to Central Asia and the Caucasus, and others will follow.

Shared vision and values – NU needs to ensure that its internal stakeholders, namely management, faculty, researchers, staff work towards a shared vision and build common values so that there is agreement on what constitutes a “World class” university. Achieving this shared vision is important also towards NU’s enabling environment. This shared vision must build on the shared values of merit, respect, trust, transparency, and accountability. As with all institutions, adopting and communicating these elements of institutional culture must start at the top.

Strengthening NU’s governance structure: NU’s Board of Trustees and the concept of “shared governance” both loom large in the determination of NU’s future. NU’s Board could benefit from additional independent Board members. Shared governance in which faculty and researchers participate in the university’s management is a common feature of top universities. While most decision-making councils at NU have faculty, researchers and student representatives, NU will explore further venues to build a stronger sense of participation and voice.

Closing the remaining cultural gap – Building a global-quality international university from scratch is a tremendous task in any country. In this strategic period, NU must address several culturally based challenges. The fact that NU faculty is mostly international while the administrative staff is almost entirely nationals may create some frictions due to misunderstandings. A strong sense of team based on trust, respect and a sense of common purpose among the NU community may help overcome cultural differences.

Bureaucracy and red tape – All universities wrestle with perceptions of government bureaucracy. NU is no exception. Within NU, bureaucracy creates tension between mostly international faculty

and mostly national administration staff because the former often do not understand the bureaucratic constraints under which the latter have to work or the consequences of not following the rules, and the latter do not understand the cost of the bureaucracy to faculty.

Research – To be internationally competitive, published NU’s research must be globally cutting edge and path-breaking published in top journals. As NU’s research programs mature, NU will need to link itself more intensively to global research centers of excellence. In today’s world, top research in most disciplines is a team sport, and NU researchers must ensure that they are members of recognized global teams in their areas of expertise. NU’s partners could play an important supporting role in achieving this objective.

In parallel, NU is also called on to contribute to Kazakhstan’s modernization and growth to lead RK to the vision of 2050. To play this critical role, NU must apply its research skills to priority issues for Kazakhstan as well. Therefore, developing research collaboration with other Kazakhstani universities and research centers will be important. However, NU’s main contribution to the country’s future remains the development of future leaders.

Two rapidly developing elements of NU’s education and research landscapes are doctoral and post-doctoral programs. We can now confidently ascertain that NU bachelors are very competitive internationally, but it is important that they also ‘live’ the culture of top global universities. Thus, we encourage our graduates to continue their studies abroad. Once they finish, we also want them and other talented graduate students to contribute to the development of Kazakhstan.

Consequently, NU will ramp up its offerings of high-quality Ph. D. programs – and efforts to attract international students – and expand the number of post-doctoral research positions. NU has recently increased the number of post-doctoral position both to jumpstart the development of a campus-wide research culture and import role models for our students, but also to attract returning diaspora through competitive packages (financially and research opportunity-wise) and thus grow potential future faculty for NU as well as other Kazakhstani universities. Postdoctoral researchers will also support faculty research. The proposed development of NU satellite offices located in areas with significant Kazakhstan diaspora could also help in developing a pipeline of candidates.

Focus – A key challenge in the coming decade will be to develop NU’s “brand,” in particular on the international scene. NU will define its niche by focusing on areas of comparative advantage and concentrating its resources to create critical mass. While this is initially a research challenge, it will quickly migrate to the other spheres of our activities. Addressing the challenge of focus also means therefore to consolidate – be it around a manageable number of key research themes of importance to the world and Kazakhstan, or in the other NU mandates.

Human Development Issues – Universities are if nothing else about developing human capital. While students naturally take center stage, the development and retention of high-quality faculty, researchers, and of top-notch administrators are critical for NU’s future growth and development.

Staff development – NU is always likely to have a significant number of international faculty members, but it will continue to seek qualified Kazakhstan nationals who can grow into leadership positions. A challenge here is that Kazakhstani faculty and researchers who meet NU’s high hiring standards are often well settled at top universities in other parts of the world which can make it difficult to attract them back. Nevertheless, attempts to tap Kazakhstan’s diaspora will be increasingly important. Plans are underway to develop NU Satellite offices in areas of the World with high concentrations of the academically oriented Kazakhstani Diaspora. NU plans the first office in the Bay area of Northern California to open in 2018 or 2019.

At the same time, developing its current high-quality national staff further and retaining them is in NU’s and the country’s best interest. Therefore, NU will strengthen its staff development

programs, including clarifying career paths. Consequently, the best and brightest will start to form a talent pool not just for NU, but also for other higher education institutions in Kazakhstan. Staff development will include an active program of talent development and retraining.

As to its international faculty, NU plans to roll out an enhanced onboarding and professional development program to acquaint new faculty members on arrival to the special features and nature of NU and of Kazakhstan. This enhanced orientation will provide them a better ability to “hitting the ground running” and ensure rapid integration into NU’s community. With faculty from over 50 countries, such training is essential to ensure that all members of the NU community understand and embrace NU’s core values.

Faculty Retention: The pace of NU’s initial development dictated that we initially devoted most of our time and resources to recruit new faculty and staff. However, moving forward, NU will adopt a more balanced approach that shifts attention from recruitment to retention.

NU decided not to adopt a tenure system but fixed-term contracts with gradual increasing lengths. This decision reflected the recognition that a new university in what is a relatively unknown country would have to recruit over several generations to build the faculty it desires to retain. The steady improvement in faculty quality, in research, has validated this approach.

However, it is also the case that the relatively short initial contracts, while protecting NU from having bad hires around for a long period, does not reassure NU faculty and gives them an excuse to begin looking for their post-NU position early on. Inevitably, the best faculty will quickly come to the attention of other universities, forcing NU into a competition. Sending early signals to the best faculty of NU’s long-term interest in them could avoid this situation. NU is exploring options to manage the term contracts more flexible.

Finances—NU will have to move toward a more independent financial footing during this strategy period to give the university more financial security and flexibility and lighten the burden on the Kazakhstani taxpayer. NU will increasingly focus on developing a variety of income streams; these could include:

- i. Tuition;
- ii. Research grants;
- iii. Income from economic activities (royalties on, or sales of inventions and patents) and industrial collaboration; and
- iv. Income from alumni contributions and selective access to endowment funds

In the context of the planned growth in NU’s student population, it is neither practical nor desirable to expect Government to expand the number of scholarship grants for NU students. Thus, tuition income will play an increasingly more important role. NU must manage tuition (“pricing”) in a way that ensures NU’s competitiveness, yet also continues its merit-based admissions policy. An effective needs-based fellowship program ensures that all qualified Kazakhstanis can compete for places at NU regardless of social and economic status, and provides financial relief to the needy students such that NU’s “social elevator” function remains intact.

Priority tasks for NU will be to study a viable and practical means of determining “needs” in the Kazakhstan context, while also negotiating with Government to provide scholarships, not as a fixed amount tied to a specific student but rather as block grants. This shift would allow for more nuanced and efficient use of scholarship funds.

NU will increasingly seek research grants from non-government sources inside and outside of Kazakhstan. NU’s capacity to attract external grants will depend on its reputation and on the ability of its faculty and researchers to collaborate with top researchers elsewhere. NU’s unwavering commitment to a merit-based system of entry and exit is critical to this reputation, as are the successes of its graduates and the research output of faculty and researchers.

In parallel, faculty and researchers will be encouraged to increase collaboration with industry and business via contract research and to license of the results of NU research. The Astana Business Campus is expected to play a growing role in this endeavor as will the international advisory council of the Graduate School of Business.

A growing loyal alumni group will be important to NU future financial sustainability. Creating a supportive alumnae group will take time and resources, and alumni must see NU as staying relevant to their career aspirations such as by offering life-long learning products. NU is working on an outreach strategy to develop this important relationship. Increased philanthropic giving may also require revisions in Kazakhstan’s tax code.

In the meantime, NU’s endowment must be tapped wisely and prudently as it will take time for the country to develop a culture of contributing to university endowments, and for NU’s alumnae to have the financial wherewithal to be able to help (re-)build the endowment.

Even with best effort on all these fronts, NU will continue to seek recourse to Government financial allocations for years to come. However, gradual gains in discretionary resources will increasingly make large differences in NU’s ability to deliver on its full potential.

Internationalization of the Student Body – In the next decade, a major NU’s goal is to diversify and internationalize its student body as NU’s graduates will have to lead Kazakhstan in an increasingly globalized world and to contribute solutions to global challenges. To provide regional leadership, NU must have a student body that includes top students from other Central Asian countries. To be comfortable in a globalizing world, NU students must learn and live with peers from other nationalities and cultures. In this regard, NU has set an ambitious target for the growth of its international student population: to move from less than a half of one percent today to ten percent by 2025. And to at least 12% by 2030.

Increasing internationalization will require a significant targeted outreach program coupled with considerable scholarship support (see App. E for details). The outreach work will also require collaboration and continuous consultations with Government bodies and other leading Kazakhstani universities in creating an attractive image and conditions for international students with the goal to make Kazakhstan as an education hub in Central Asia.

NU’s Organization – NU’s current organizational structure – a series of distinct schools and laboratories – was a natural first step in its development. As NU moves into the next phase of its development, however, NU management must continue to address the following questions:

- a. Is NU’s current school architecture the best and most efficient one? What principles should underpin decisions on the future of NU’s structure?
- b. How and when will the digital revolution affect NU’s organizational structure as well?
- c. What will be the organizational implications of NU’s focus on strong interdisciplinary research programs⁷?
- d. What principles will shape decisions on whether NU should:
 - i. Develop branch campuses
 - ii. Establish additional schools, and
 - iii. Maintain or combine existing schools?

Considering Kazakhstan’s large number of higher education institutions, it seems quite doubtful that NU would develop a domestic branch campus system in the period to 2025. Rather, NU will strengthen relationships and build partnerships with the country’s other top universities for mutual benefit. This outreach could be digitally-based as referenced to above (the “digital knowledge

⁷ See op cit., “*Facilitating Interdisciplinary Research*”

web”) with NU at the hub. As also mentioned earlier, NU plans to set up satellite offices in areas with significant diaspora part to attract them to NU and gain their collaboration. These satellite offices will serve multiple purposes and could at an appropriate time become NU’s international branch campuses.

When thinking about whether to set up additional schools, NU will review the demand and need for such significant initiatives, but at this point, we would first look at whether the current school architecture is the most appropriate one. Even with the planned strategic expansion of the student population, NU will remain a compact university and has to keep asking itself whether it will have enough critical mass to develop synergies across related disciplines and whether it can keep silos from developing.

An area that will see significant organizational and structural development is related to NU’s innovation and commercialization cluster and related ecosystem. Startup pitching events have increased in frequency and scope, and more students, as well as young entrepreneurs from outside the university, participate with a palpable increase in interest and enthusiasm. NU has proposed plans to expand its IT-related co-working space and incubator and accelerator functions for digital start-ups to the post-EXPO area while maintaining similar functions for engineering and laboratories-oriented entrepreneurs on campus. Further developments are on the horizon with the expected arrival of companies’ R&D and pilot production sites on campus and at the ABC. Corporate sponsorships will also be sought to establish a ‘design center’ for students to encourage interdisciplinary problem-solving thinking and product development.

Evolution of NU’s Partnerships – Our strategic partners have been an integral and critical part of NU’s development since its inception. However, today’s NU is a very different institution than the one partners saw when NU launched the partnerships. During NU’s early days, the partners were in a consulting role to NU, helping NU prepare curricula, recruit faculty, delivered courses as needed, advised on policies, and instructional support. Today, NU schools have established curricula and quality faculty, NU has put in place university-wide policies, academic and research decision-making bodies, quality enhancement framework, etc., and has learned to stand on its feet. The need for partners remains, even though the nature of the partnership must change and grow to reflect NU’s rapid development. NU desires to advance to the next stage of partnerships with the Strategic Partners that of partnerships between equals as NU ramps up its research efforts and looks to further connect to global centers of research excellence.

NU’s partnerships need to move in two different directions – from school-based to university-based, and from formal contracting arrangements to less formal faculty-to-faculty arrangements based on shared research interests. Both sides of the partnership will need to facilitate faculty-to-faculty and student exchanges.

It is noteworthy that NU has in the meantime become co-founder of a new institutional partnership arrangement, the Asian Universities Alliance (AUA). The AUA, launched in 2017, brings together fifteen top Asian universities to foster faculty and student exchanges and research collaboration to address together some key global challenges of this century, but also to raise the profile and recognition of Asian universities. NU intends to invest in its traditional and in its new partnerships to straddle the proverbial East and West and build a truly global outlook.

The effects of changes in Kazakhstan’s secondary system – While disrupting Kazakhstan’s university system through the creation of NU, President Nazarbayev also launched a program to reform Kazakhstan’s pre-university education. The vehicle of choice is the network of the Nazarbayev Intellectual Schools (NIS), NU’s sister organization covered under the same legal framework. Currently, 20 schools operate throughout the country. With international technical support, NIS

has adopted curricula and developed textbooks, teaching and assessment methodologies of highest international standards. Today it offers for instance accredited International Baccalaureate (IB) and “A” Level programs and is preparing trilingual students for entrance into NU, but also the world’s best universities.

NIS’s outreach to the rest of the school system takes the form of increasingly making available its textbooks to and training teachers of the other schools. NIS has been the first school system moving from an 11-year to a 12-year program, a move that will be followed by the general school system. It brings the country more in line with global standards. As the NIS program spreads to other schools, the number of high school graduates who qualify for admission to NU is likely to rise as will the preparedness of incoming students. This increase in qualified candidates will facilitate NU’s plans to increase its student population substantially over the next decade.

Furthermore, with better prepared high school graduates, future NU undergraduate entrants may not need a full year of preparation to succeed at NU, which means that NU will be able to recalibrate its Foundation Year Program (NUFYP) substantially. One possible new direction would be to “spin” NUFYP off as a separate entity that serves all top universities in Kazakhstan and not just NU. It could then prepare students for entry into the world’s best universities, including NU.

Complacency – Overall, NU has done very well to date. The risk is that there may be a temptation by some to say, “We have done enough.” NU management will have to walk a careful line between stressing NU’s accomplishments and signaling that much still has to be done.

10. FROM ASPIRATIONS TO REALITY

This strategy focuses on setting out the issues NU will likely face in the coming years. As a first step in launching this strategy, NU management will organize working groups to develop detailed implementation plans for each challenge identified, the working groups established to follow up on the EUA recommendations could serve as a good model.

Since it opened, NU has built a strong foundation on which this new strategy will rest. Delivering on the country’s vision for NU is within reach, but as the previous chapter demonstrates, challenges remain. Meeting these challenges will require continuous concerted efforts by all parties and stakeholders, that is the national leadership, university leadership, and faculty, students, administration, and NU partners. The payoffs for the people of Kazakhstan make this effort not only worthwhile but also essential. However, we must also remember, NU is only one-third along its way, there is still much to be done

APPENDIX A: NU SWOT ANALYSIS

| Strengths: | Weaknesses: |
|---|---|
| <ul style="list-style-type: none"> • The quality of students; • The success of graduates (“NU ambassadors”); • Student involvement in communities – giving back; • A growing domestic & international reputation; • National reputation: pride in NU’s brand; • High-quality international faculty; • Departing faculty leave for high-quality appointments, signaling both the quality of NU’s faculty and NU assignment as a good stepping stone for further career development; • Departing faculty as ambassadors; • Strong support from the Head of State; • Robust quality enhancement system; • Low walls around NU Schools (as yet); • Youthful, energetic & flexible institution with willingness to change as needed; • Foundation laid for innovation ecosystem; • Attractive to high-quality national staff; • High motivation of all members of the NU community (students, faculty, staff); • A residential campus, increasingly important as NU raises its intake of international students; | <ul style="list-style-type: none"> • Country’s global position; • Short initial contract of faculty – need a more flexible system; • Less than optimal-relations with the rest of the country’s universities; • Overdependence on government support; • Communications, both externally and internally; • Isolation from rest of country’s universities; • The spread of NU values still work in progress; • Lack of agreement on what a “world class university” is; • International/national divide; • Faculty/administration divide; • Weak essential services: IT and HR; • Bureaucracy, especially in financial and procurement matters; |

| Opportunities: | Threats: |
|--|--|
| <ul style="list-style-type: none"> • Research leadership in Central Asia • (CA) and increasingly beyond; • CA regional leadership; • Strong relationship with neighboring countries; • Growing geopolitical importance of Central Asia; • Strengthen support to Faculty, including more faculty exchanges; Increased student exchanges and internships; • ABC's potential as an outlet for NU graduates; • Continuous innovation, especially digital; • Strong contribution to "Digital Kazakhstan" • Increased interdisciplinary research; • Internationalization of student body; • Review School structures for efficiency gains; • Collaboration with other universities within Kazakhstan and in Asia; • Development of traditions and brand: the "NU way". | <ul style="list-style-type: none"> • Country's increasing risk aversion and intolerance of failure; • Global and regional competition for faculty, researchers, and students; • Instability from neighboring countries; • Uncertain research budget: amount and predictability; • High government funding relative to the rest of the university system makes NU a target; • Government fiscal situation, reducing its ability to support the next phase of NU's development, especially ABC construction; • Staff burnout especially among "first generation" national staff; • Diminished ability to attract the best national staff and the best international faculty/researchers because of reduction in competitiveness; • Brain drain. |

APPENDIX B: SUMMARIES OF UNIT STRATEGIES

CENTER FOR PREPARATORY STUDIES (CPS)

The vision for CPS to accomplish in the next few years is first, to refine current academic programs and develop new ones, especially commercial programs; second, to cut operating costs by becoming more efficient; and third, to become internationally recognized.

The Center for Preparatory Studies (CPS) now delivers two academic programs: the Foundation Year Program (NUFYP) and the Zero Year Program (NUZYP)—a pre-master’s program to prepare graduate students for study at Nazarbayev University (NU).

NUFYP: Although Kazakhstan has already begun introducing a 12-year education system, and the expectation is that more students will be ready to apply directly to NU’s undergraduate schools, there remains a need for a foundation program for the immediate future. The vision for CPS is to reach the brightest students in Kazakhstan who have not yet achieved a sufficient English level to study at NU and to give them the opportunity for a great education here in Kazakhstan. This goal is good for Kazakhstan, and it also helps NU reach its goal of doubling the student body. Furthermore, since foundation programs or similar type programs are necessary even in English-speaking countries such as the UK and the USA, it should be expected that there would remain a need for some Kazakhstani students, especially to prepare them to study in a quality, research-focused University.

NUZYP: CPS was asked to begin a pre-master’s program in 2017. The first cohort finished in May 2018, and the feedback from the students is positive. The goal of the University is to see this program more than double in size, and CPS is ready to refine and adapt the program to meet the needs of NU’s graduate schools.

BECOMING MORE EFFICIENT

CPS is in the middle of reducing its operating costs through reorganization of its structure and renegotiating contracts with faculty. CPS expect that even though it will now operate two programs and teach more students that it will still be less costly to operate.

CPS will seek to become internationally recognized. CPS could take several directions could, but it has not yet decided on the exact. One effective method is to become accredited by CEA (US organization), BALEAP (UK organization) or both. Accreditation would make CPS an attractive place for students in the region to come and learn English—the biggest obstacle for many students to overcome when pursuing advanced studies. Furthermore, if CPS can lower operating costs, the tuition would be more realistic for students, and CPS can contribute to NU’s goal of increasing internationalization.

NUFYP OPTIONS TASK FORCE FINDINGS AND RECOMMENDATIONS

The NUFYP Options Task Force met during April, May and June 2017⁸, to:

- Generate between three and six viable program options for NUFYP, considering both the coming changes within the University undergraduate curriculum for a common first year and in Kazakhstan’s secondary educational system;
- Assess the relative strengths and weaknesses of each option;

⁸ Meeting dates: 27 April, 4 May, 18 May, 25 May and 8 June, 2017

- Recommend to the Provost, Academic Council and the President the best overall NUFYP program option; and
- Propose a staffing plan that can effectively and efficiently deliver the proposed NUFYP program option.

We aim for the Foundation program to be benchmarked against international standards. For instance, the program could ideally be considered as an acceptable Foundation program for U. K. Russell Group universities and other universities in USA, Australia, Canada and other potential undergraduate destinations. It is worth noting that UK and Australian universities typically prefer “pathway based” programs, while US universities prefer English language skills-based programs.

A 2016 student survey shows that this program is meeting and exceeding students’ expectations. We would like to move forward with care so that we retain the important lessons of the past seven years.

These recommendations are consistent with NUFYP Program Aims and Foundation Learning Outcomes while meeting the changing needs of undergraduate schools through preparing students specifically for the new core curriculum. The NUFYP Program Aims and Learning Outcomes are subject to regular revision, consistent with the NU Quality Enhancement Framework.

These recommendations are based on a review of the Nazarbayev Intellectual Schools curriculum and aim to encourage advanced students.

SCHOOL OF HUMANITIES AND SOCIAL SCIENCES (SHSS)

At its core, SHSS exists to advance scholarship and teaching related to the problems that face Kazakhstan as it continues its economic development and secures its place in the global society of the 21st century. We believe that the greatest challenges facing Kazakhstan, the region, and the world in the coming decades are fundamentally human and that the work that we do will ensure that those leaders and citizens challenges are prepared to solve them.

Our academic offerings prepare students for the needs of the current labor market in Kazakhstan and go further to equip them with an orientation to knowledge and entrepreneurship that will prepare them for any circumstances that they may not yet foresee. Our students will be the leaders equipped to solve the social problems of the post-industrial world, and they will approach them with a strong orientation to Kazakh culture, the history of the Republic, and community. This education content will ensure that they do not lose sight of what makes the country unique as it finds its place in the global community. We also provide courses and programs that underpin the curricula of other Schools to ensure that all NU graduates share this commitment to the human dimension of whatever subject that they study.

Research is the foundation for all of the work that happens in SHSS. Our scholars represent the span of modern Social Science and Humanities disciplines, and they include experts familiar with nearly every part of the world. We strategically recruit specialists from Kazakhstan and the Central Asian region as well as scholars with methodological and theoretical expertise strategically important for Kazakhstan. In particular, we have strengths in Eurasian Area Studies, Geoinformatics, Migration and Social Integration, Gender Issues, Language Transformation, and Security and Diplomacy. As the School grows, we seek to increase our international profile through the capture of large external grants and publication in the leading scholarly outlets. We also intend to develop international research centers that will establish NU as the world’s leading institution in Eurasian Area Studies, Development Economics, and related areas.

As we become the global leader in research on the Eurasian region, we will leverage that advantage to develop research partnerships with global institutions and at the same time, integrate more local scholars and institutions into our work. Through this, we will become a critical point of articulation between local and international scholars. Through our relationships with local institutions, we will also seek to develop local capacity, translate the NU experience, and learn to understand our facilitating environment better. At the same time, SHSS is a self-aware community committed to modeling best practices in the areas of inclusion and governance. The School is establishing internal policies and procedures to ensure that all community members feel secure to pursue their fullest potential.

SCHOOL OF ENGINEERING (SENG)

The number of student intake is expected to grow substantially in the next few years. To support of this growth, the number of faculty members in each of the four Departments (i.e., Civil engineering, Chemical engineering, Mechanical engineering, and Electrical & Electronics Engineering) is expected to grow to about 20 by 2020. Currently, there is a shortage of faculty in some Departments, particularly in the Civil and Chemical engineering. Most of the Departments also need more experienced faculty members. In the past, there is a lack of good applications for the advertised faculty positions. This trend has changed in the recent recruitments. The School is constantly reviewing its hiring strategy and process to meet the recruitment challenges.

There are other challenges in addition to faculty recruitment:

- Currently, the programs are supported mainly by government grants.
- There is a need to diversify the student population and admit international students, especially from regional countries. To achieve this internationalization goal would require improvement of the curriculum and training facilities to attract international students. The changes to the undergraduate curriculum to satisfy ABET requirements have started, and there are plans to do likewise to the postgraduate programs. Regarding facilities, the School is expected to move into the new building in block three this year 2018. It may take another few years to equip the labs with proper apparatus and trained technicians.
- The School research performance regarding publications and funding to date is good considering the availability of research facilities and personnel. The School research performance is expected to improve with the new facilities in the new research building, which is expected to be ready soon. Also, the University has provided more information and opportunities for research funding. The School has plans to link these opportunities tactically to the Ph. D. program with strategic research directions to better coordinate and utilize the limited resources to enhance research performances.

As the School develops, there is also the need to expand the Departments and add new programs to meet the anticipated workforce training needs of Kazakhstan. The strategy is as follow:

- Renamed some of the existing Departments and introduce new programs. The SoE could rename the Department of Mechanical Engineering to Mechanical & Aerospace Department, and it could rename the Department of Chemical Engineering to the Chemical & Materials Engineering, and the Department of Electrical & Electronics Engineering to Electrical & Computer Engineering.
- Create two new Departments, i.e., the Department of Bioengineering and the Department of Industrial Engineering. These Departments would be able to introduce new programs to meet the workforce needs in emerging fields.

The strategic move to rename and create the new Departments would require additional financial resources from the University.

We have aligned the School development with the wider NU community and goals, which is heavily research and innovation oriented. Kazakhstan's 2050 vision is to reduce the dependence on oil and gas so that the share of non-energy in total export would double by 2025, and triple by 2040. Creating new programs in bioengineering and industrial engineering would support the nation's next phase of industrialization. Also, the new programs would also focus on entrepreneurship and the creation and design of novel products based on the application of scientific theories and sound engineering principles. This reformed education is designed to lead to an increase in domestic entrepreneurship and through that to an increase in small and medium enterprises to support the economy by 2030.

SCHOOL OF MINING AND GEOSCIENCES (SMG)

The School of Mining and Geosciences (SMG) was established in March 2016 and aims to educate tomorrow's earth science leaders for Kazakhstan, the region, and the world. The school will expand knowledge and technology through teaching and research for the prospecting, extraction, recovery, and utilization of earth resources.

The strategic partnership with Colorado School of Mines, one of the top institutions in the area of earth science education and research, will help to achieve this vision by supporting curriculum design and delivery, faculty recruitment and mentoring in teaching and research, quality assurance and accreditation advise.

SMG has a long-term mission to establish the full spectrum of engineering and applied science programs in the earth resources, water, energy and environmental science. However, the initial stage of the school will cover three main areas including Mining Engineering, Petroleum Engineering, and Applied Geosciences.

These areas will be supported by undergraduate degrees leading to Bachelor of Science (BSc) in Mining Engineering, Petroleum Engineering and Applied Geosciences and Postgraduate Master Programs will lead to Master of Science (MSc) degrees within the same areas of study. SMG will establish Ph. D. programs within these areas in conjunction with the School of Science and Technology and School of Engineering of NU when the School expands and develops its research capacity. Furthermore, the school envisages offering postgraduate degrees within the areas of Mineral and Energy Economics as well as Metallurgical Engineering and Material Science.

SMG admitted students in a two-year Master program in Mining Engineering in fall 2017. SMG will launch is launching the undergraduate degrees in Mining Engineering, Petroleum Engineering, and Applied Geosciences in fall 2018. Also, SMG is accepting students for Master's in Petroleum Engineering in fall 2018. SMG will introduce a Master in Applied Geosciences and Ph. D. programs in fall 2020 in conjunction with other relevant schools.

SCHOOL OF SCIENCE AND TECHNOLOGY (SST)

The 2016–2020 strategic plan of the School of Science and Technology (SST) aims to support the Kazakhstan 2050 national strategy, within the framework of the core values and the broad mission of Nazarbayev University (NU).

The mission of NU, and more specifically of SST, supports five of the seven priorities defined in the 2050 Strategy. Specifically:

- Economic policy of the new course;
- Comprehensive support of entrepreneurship;
- New principles of social policy;
- Education, training, and retraining for advanced knowledge and professional skills; and
- Strengthening the statehood and development of Kazakhstan.

The strategies and goals of SST were developed to achieve significant progress towards Kazakhstan's aspiration to achieve preeminence in the world stage. The SST plan emphasizes the unique role of the School as an integrative partner serving the country's broad portfolio of social, economic and scientific reforms through its breadth of program excellence. The strategic directions of SST for 2016–2020:

- Improve the quality of the student body;
- Enhance the student learning experience;
- Foster faculty excellence and faculty effectiveness;
- Set best practices and standards for research;
- Establish research funding initiatives; and
- Establish human resources in research.

FUTURE DIRECTIONS

- Accelerated integration of research into teaching by augmenting coursework with research internships and providing relevant lab experiences for undergraduates;
- Packaging and re-branding our unique skills in computational sciences into a comprehensive program of Data Science to address Digital Kazakhstan needs.
- Full-scale adoption of the Core Curriculum and its common set of learning outcomes reflecting the unique NU identity, so that all our students share the same experience of a rigorous intellectual! Development, regardless of their school or major.
- Closer collaboration with the School of Medicine to empower the emerging Health Cluster in Astana.
- Sharpening the foci of our graduate programs and complementing them with an array of short-term topical training, targeting the needs of the country.
- Emphasizing the importance of critical thinking for the scientific method and the use of good evidence to base conclusions by availing our students of key courses in Humanities and Social Sciences.
- Careful cultivation of innovation and entrepreneurship skills of our students to empower new product and service development in the national interest.

GRADUATE SCHOOL OF EDUCATION (GSE)

GSE grounds its *strategic vision* in the mission of Nazarbayev University. NU bases its mission on the vision embedded in President Nazarbayev’s *Strategy 2050*. *Strategy 2050* outlines a broad vision for a comprehensive reform of education in Kazakhstan. A key component of this educational reform has been the creation and establishment of Nazarbayev University.

The School must play a central role in promoting educational reform in Kazakhstan at all levels of the educational system, promoting best practice in such areas as early childhood education, primary and secondary schooling, technical and vocational schooling, and in institutions of higher education. We must do this through the production of world-class research on educational challenges, issues, and reforms, the provision of training programs at the master’s and doctoral levels, through offering professional development activities for educators at all levels, and by providing a model of exemplary educational practice in our context at Nazarbayev University.

The school will seek during this period to embark on external evaluations. We would initiate such a process through our internal quality assurance mechanisms for programs and research. The evaluations are pivotal to the international rankings of the school and NU.

GRADUATE SCHOOL OF BUSINESS (GSB)

1. **CAPACITY:** Faculty Recruiting & Retention: 35 faculty by no later than 2030 (prefer by 2025) to support programs, research & engagement (areas: finance, accounting, marketing, management, operations management, and technology/IT. We aim for 35% domestic faculty by 2030.
2. **PROGRAMS:** Increase of Student Body across Programs (national and 20% international): A minimum of 50 students per cohort per degree program by 2025 (except for Ph. D.); a total of 800 non-degree participants by 2025.
3. **RESEARCH:** Obtain Faculty Productivity Recognition: 75% scholarly academics (research-active faculty) and ranked in the international research rankings (Shanghai Jiao Tong, UT Dallas, and FT list). Participate in cross-functional research centers across campus (Innovation Lab, Big Data, Industry 4.0).
4. **IMPACT & ENGAGEMENT:** Obtain international recognition through accreditation (at least AACSB) and appearance in research rankings (see above) by 2025. Increase engagement activities (conferences, research symposia, events, media mentions, international advisory board, case study series).

GRADUATE SCHOOL OF PUBLIC POLICY (GSPP)

MISSION

Our mission to improve “the quality of life of the people of Kazakhstan and Central Asia. We do this by training leaders to improve governance through excellence in teaching, research, and executive development that focuses on key policy and leadership challenges.”

TEACHING

One of the key strategic objectives of GSPP is to equip and train Kazakhstani and Central Asian public sector leaders with the relevant knowledge and skills of good governance. GSPP has so far done this by running both Credit Bearing and Non-Credit Bearing courses and programs.

GSPP's academic offer has expanded over the years with the launch of a Master in Public Administration in 2015 and a Ph. D. Program in 2017. GSPP plans to launch, from the academic year 2020–2021, an Executive Doctoral Program.

These programs have so far been successful as evidenced by the fact that courses are well received, and student enrollment has increased significantly over the years and is expected to grow even more in the next few years – from 100 students in the academic year 2017–18 to 335 students in 2024–25.

In addition to launching new degree awarding programs, GSPP has also offered several non-credit-bearing courses. GSPP designed and delivered for a wide range of stakeholders Executive Education Programs devoted to evidence-based research practices, health policy, and management, public councils, transformational leadership, to the applications of behavioral insights to public policy, and to the essentials of policy development

RESEARCH

Research is one of the areas in which GSPP has made significant progress. Our research output has increased in absolute terms, the output per faculty member has increased, and the quality of publications has considerably improved.

In the 2013–2017 period, the research output of GSPP has increased by 17 times. This result is partially due to the increase in the size of GSPP faculty, and it is also because the research productivity of GSPP faculty members has significantly increased. After the expansion of the faculty in 2014, GSPP faculty members produced 15 publications in 2015, which corresponds to 1.875 publications per faculty members. In 2017, the 15 (resident/visiting) faculty members of GSPP produced 34 publications or 2.27 publications per faculty members. This output represented a 21 percent improvement in just two years. The quality of GSPP publications has also increased. All of GSPP journal articles now appear in peer-reviewed journals– most of which are indexed in Scopus or the Web of Science and have a high impact factor.

In line with the goals that Nazarbayev University plans to accomplish by 2030, GSPP aims to continue to increase the quantity and the quality of its research output.

SERVICE

GSPP regards itself as a service school, in the sense that in addition to carrying out its teaching and research duties, GSPP expects to continue to serve the NU community, the university, and a wide range of stakeholders from our enabling environment.

GSPP believes that its product and services are in line with the *Strategy Kazakhstan 2050* which identifies seven priority areas: developing a strong human resource base; managing well energy resources; developing a green economy; building efficient urban and regional economies while establishing more decentralized; more powerful and more accountable governance mechanisms; diversifying the economy; promoting global and regional integration; and, last but not least, building institutions.

With regard to developing human resources, especially in the civil service, GSPP has already conducted several workshops, seminar and training sessions for civil servants. And, in the coming years, GSPP plans to conduct more and better programs.

In addition to organizing, designing and delivering workshops, seminars and executive education programs for various stakeholders, GSPP faculty members regularly give talks in local ministries and often provide expertise that Ministries may require. GSPP faculty provided expert opinion on legislation (Office of the General Prosecutor, OCSE), codes of conduct (Agency of Civil Service and Anti-Corruption), research and diagnostics (Nur Otan’s Public Policy Institute). GSPP faculty members participated in the induction program for the newly elected MPs and the evaluation of the Academy of Public Administration under President of the Republic of Kazakhstan; and GSPP has also provided – in line with NU’s first mission – training to faculty members from other Kazakhstani universities on research methods.

GSPP’s commitment to serving stakeholders is also evidenced by the fact that several GSPP faculty have been appointed to various working groups, Such as: the working group on improvement of anti-corruption legislation established by the Agency for Civil Service Affairs and Anti-Corruption, the working group on cooperation with Akimat of Astana city and the working groups on “Kazakhstan-2025” Strategy set up by the Ministry of National Economy. GSPP faculty members are also appointed to the Supervisory Board of the Republican Center for Health Development of the Ministry of Health and the Commission for the Modernization of the Supreme Judicial Council of the Republic of Kazakhstan.

THE WAY FORWARD

In the next few years, GSPP expects its student body and its faculty size to increase, to produce more and better research, to serve the University, the community, and the various stakeholders. GSPP also plans to expand and deepen its expertise.

According to GSPP’s strategic plan, the size of GSPP faculty is expected to triple in the next seven years to match the needs and the demands of a growing student body.

The expansion of the size of the faculty will enable GSPP to gain expertise on new topics and issues that are beyond the areas of expertise of the existing faculty. The expansion of the faculty will also enable GSPP to deepen its expertise on a few, strategic areas And to have a critical mass of scholars with similar research interests and to establish itself as a center of excellence both at the regional and at the global level in such strategic areas such as public sector and civil service reforms in Central Asia, energy security and natural resource governance, economic diversification and sustainable development.

INTEGRATED ACADEMIC HEALTH CARE AND SCHOOL OF MEDICINE (SOM)

Our **Strategic priorities** in which we will invest our time and efforts to ensure success and long-term sustainability are:

Human Capital – we want to create a supportive environment to recruit and retain the most talented faculty, staff, and learners. Our strategy will focus on career development, life-long learning, professionalism, job satisfaction with competitive remuneration, building local capacity and foster a sense of belonging to the NU Medicine community of educators, researchers and healthcare professionals.

Biomedical research – we want to become the leaders in translating laboratory-based discoveries into the development of novel treatments, new medical devices, and diagnostics. To do so, we

will continue to integrate research, education and clinical care with the ultimate aim to promote a healthy lifestyle and prolong the life of the people of RKZ. Our priority will be the development of large-scale multi-disciplinary programs aligned with the main principles of integrated health care systems and the health priorities of the country. Our efforts will focus on the 4Ps of modern medicine: Predictive, Preventive, Participatory and Personalized. E-health with the application of digital tools applied to health care will empower patients to take responsibility for their wellbeing, and to become the decision makers in the predictive, preventing and treatment options.

Education and Training – we want to innovate and continue to transform our existing professional programs in medicine, nursing and public health as well as developing new programs in pharmacy, sports medicine at master and doctoral levels. We want to build a culture of effective learning and education in our hospitals and research centers to ensure that all healthcare professionals are well equipped with the skills, knowledge, and competencies to practice modern medicine. We will continue to disseminate our models of education and training to the other medical universities in the RKZ but emphasizing their global impact and international dimension.

Patient- and family-centered care – we want to be the leader in the delivery of high quality, safe and effective, evidence-based, patient- and family-centered care. In our hospitals and clinics, patients and families will be listened to, informed, respected and involved in their care. Care will be customized to reflect patient needs, values, and choices. SoM will integrate the acquisition of the skills, knowledge, and competencies for the delivery of team-based patient- and family-centered care into the learning outcomes of our health care professional programs at every level (graduate and postgraduate).

NATIONAL LABORATORY ASTANA

MISSION

- To carry out fundamental, interdisciplinary and applied research that addresses the nation's most pressing science and technological challenges.
- To promote Kazakhstan's green economic and technological development, and to become a world-class institution well-known in research, academic and *clinical* excellence.

VISION

- To be internationally recognized institution delivering cutting-edge, high-quality science and technology to accelerate the nation's socio-economic development and innovative achievements in green economy

STRATEGIC PRIORITIES

“National Laboratory Astana” should be a key instrument for the solutions of actual problems in priority research areas as life sciences, energy and advanced materials science, global environment and geoscience, computer science.

NLA – NU is in the process of undertaking a review of the NLA to ensure that it meets two objectives: first, that is seamlessly integrated into the wider NU community. Second, that it truly plays the role of a national lab by working closely with other laboratories in Kazakhstan and around the world. The NLA is a center of the international level with unique material and technical resources and staff, who implement scientific inventions in breakthrough areas of knowledge for the solutions of the most actual national and global problems.

Scientific priority areas of NLA are selected in compliance with basic priorities of socio-economic development of the country, Strategic Development Plan of the RoK until 2020 as follows:

- Integrate, fundamental and applied research with the purpose of creation and development of a unique scientific-technological basis for the implementation of state strategic mega-projects;
- Develop new areas of science, development of innovational technologies, professional training of staff, who will ensure national security and competitiveness and enable economic growth of the country;
- Assure conditions for implementation of the mission through technologies of new generation technologies, infrastructure, and operational activities;
- Develop of state-private partnership for intensification in development of priority areas of science, technique, and technology with the active commercialization of scientific research;
- NLA within international cooperation strives to become an equal partner with leading world scientific, academic centers, national laboratories, companies, specializing in the development of scientific-technical products.

INNOVATION CLUSTER

In the Address speech to the people of Kazakhstan dated 27 of January, 2012 the President of the country emphasized that the Innovation Cluster should be formed within NU, which would facilitate the transfer and creation of new technologies. This was the basis and prerequisite for the formation and development the Innovation cluster within the NU.

To implement the instructions of the Head of State, elements of the infrastructure of the Innovation cluster of the Astana Business Campus (hereinafter referred to as the Cluster) were created, including the Commercialization Office, the Office of Contract Researches, the Business Incubator, the Pilot Technopark and the Experimental workshop.

Currently, the Cluster's activities include a system of support for start-up projects, contract research, commercialization of projects and management of intellectual property rights, professional services, as well as infrastructure development and attraction of innovation companies.

Startup Projects Support System, established at NU, provides such support instruments as a business incubation program, business acceleration of projects, funding and residency in the Technopark. In the future, the University will work on further improvement of this system, expanding it with additional support tools, with the focus on high-quality launch of start-ups and market promotion. In cooperation with the international venture fund I2BF Global Ventures, a pilot fund I2BF-ABC Seed Fund was established to invest in promising and high-tech start-up projects.

Over the past two years, three acceleration programs and one incubation program for innovative projects have been conducted at NU. The total number of projects that have completed the acceleration program - 32 projects, 7 projects have graduated from the incubation program. Projects are selected in such priority areas as IT, industry 4.0, biomedicine, new energy, clean technologies, agricultural technologies, etc. Among the participants in the acceleration and incubation programs, a significant proportion of the projects are conducted by NU student.

One of the promising projects that have passed an acceleration program is a project by NU student called "Spot Spray System" – this is a smart system of spraying agricultural plots with herbicides, which allows to reduce costs and increase yields using computer vision technology and machine learning. This project is recognized as one of the 25 most promising global startups at Google

Campus TelAviv Computer Vision, held in Tel Aviv. In addition, the project attracted foreign investment in the amount of 110,000 US dollars from the Hong Kong Venture Fund ARTISAN.

Another priority direction of the Cluster is the development of cooperation with the industry and the involvement of the scientific and technical potential of NU to conduct contract research aimed at solving technological tasks based upon the order of the industry. Thus, contract research projects have been conducted for international and domestic organizations such as World Bank, USAID, Shell, Total, Petrofak, ERG, Samruk-Energo, Karachaganak Petroleum Operating B.V. at NU. Following the results of contract research, experimental facilities and research laboratories have been established on the territory of NU to carry out joint work with the industry.

At the same time, NU in cooperation with other leading universities of the country plans to implement projects aimed at addressing and introducing new technological and innovative solutions for subsoil users as part of their annual obligations to finance Research and Development.

Since January 1, 2013, the system of commercialization of the developments of researchers and employees of NU is in operation. Following the results of the implementation of commercialization projects, today a pool of technological solutions and intellectual property objects has been formed, licensing agreements have been signed for the sale of products. The total number of funded commercialization projects is 21. As a result of project implementation, 63 applications have been submitted for the protection of intellectual property rights, 46 domestic and foreign patents have been received (40 domestic, 4 Eurasian, 2 US), 3 licensing agreements have been signed. Also, NU is working out possible options for cooperation to promote NU developments to foreign markets, including US markets.

The official opening of the pilot Technopark, which is one of the elements of the Cluster, was held on July 18, 2014. To create a favorable Cluster environment, an appropriate infrastructure has been created at the site of the pilot Technopark, basic services have been launched, including technical services such as design, prototyping and pilot production services, as well as project support services. To date, all available areas of the pilot Technopark are occupied by the innovative projects and companies. The total number of residents is 17 innovative companies. Among the residents of the pilot Technopark there are companies that have undergone an acceleration program, as well as companies established on the basis of projects of scientists and employees of NU. Anchor companies are also attracted.

In the near future, NU, based on the accumulated experience, will continue to work on the development of these priorities, which will ensure the further development of the scientific, technical and innovative potential of the University.

Work on the development of the Cluster will be continued taking into account the factors and challenges of the modern economy, including the conditions of the fourth industrial revolution.

APPENDIX C: EUA IEP RECOMMENDATIONS

GOVERNANCE AND DECISION-MAKING

1. Given the dichotomy between predominantly foreign academic staff and primarily local administrative staff and students, review processes should take place regularly to make sure that all sectors of the university continue to work for the same goals.
2. Discuss and negotiate with strategic partners about changes needed in partner relationships.
3. Continue plans to hire a Chief Information Officer and develop a comprehensive and university-wide information system that includes building up an integrated student database.
4. Ensure that the faculty is aware of university-level support services and, if necessary, improve them.
5. Improve internal communication for better alignment between academic and administrative staff constructively, both formally and informally, to ensure an understanding of common rules, regulations, and procedures and strengthen the collaborative spirit between the two parties.
6. Streamline and harmonize administrative processes and approach, investigate if NU needs more harmonization between school and central administrative processes. Additionally, rethink cooperation patterns and balance of decision-making power between academic and administrative decision-making staff.
7. Set clear rules for donation and other private funding to maximize their benefit and to continue to ensure NU's integrity.

QUALITY CULTURE

8. Build up the Institutional Research Unit to analyze information within a coherent quality enhancement strategy.
9. Continue implementing the quality enhancement system to internalize quality culture at NU fully. Set up a university-wide system that enforces NU strategy and priorities, and ensures a common understanding of quality while continuing to respect the specific approaches and needs of the schools, but without adding additional administrative burden on staff.
10. Bring quality enhancement of administrative, governance, research and student services into the overarching quality enhancement system.
11. Implement the ESG systematically in the internal quality enhancement approach.

TEACHING AND LEARNING

12. Stake out longer-term career paths for academic staff, including the possibility of tenure, to ensure the sustainability of academic staff and the research capacity of NU.
13. Set in place different promotion criteria to focus as much on didactic and service merits as on research and considers differences between disciplines and publishing practices.
14. Allocate additional core administrative staff to eliminate the considerable administrative burden on academic staff and to facilitate their teaching and research work.
15. Give deans more autonomy to use grants for the staff in their schools as they see fit.
16. Set up a single student services office where NU does the allocation of the service internally, and which would reduce the administrative burden on students.
17. Expand career services to graduate students.

RESEARCH

18. Work on increasing trust between the local administrative staff and the international academics.
19. Work out how links can be established between the national research centers and NU to achieve a synergy and research opportunities for staff and graduate students.
20. Develop research strategies and sustainable research teams as well as cooperation arrangements between schools, research institutes, and laboratory facilities.
21. Make it easier to use allocated research funds from non-state sources within set rules, but exploiting them as much as possible.
22. Expand research support services to help staff with proposals, fund allocations, etc.
23. Make every effort to implement the ambitious research plans by, e. g., attracting top research teams and individuals.
24. Implement plans to set up post-doc and research assistant positions with career plans for NU graduates and create opportunities for Kazakhstani and international Ph. D. candidates and post-docs to work in an international research environment at NU.
25. Create milestones and indicators for the ambitious research strategy implementation covering individual researchers, research groups, and the university.
26. Implement the ALLEA Revised Code of Conduct for Research Integrity.

SERVICE TO SOCIETY

27. Continue to make activities in society visible to ensure ongoing goodwill.

APPENDIX D: THE FUTURE OF KAZAKHSTAN'S UNIVERSITY SYSTEM

PART I: CURRENT CHANGES IN HIGHER EDUCATION⁹

11 CORE UNIVERSITIES: CREATION OF EDUCATION- RESEARCH- INDUSTRY LINK

The main strategic documents that shape current higher education landscape in Kazakhstan are State Program for Education Development 2016–2019 and State Program for Industrial and Innovative Development 2016–2019. In line with these two state programs MES selected 11 core universities in the regions that focus on teaching and research in metallurgy, petroleum and chemistry, food industry, mechanical engineering, construction materials. These universities receive more funding, better facilities and exercise academic freedom on postgraduate level programs.

Starting from 2016 the universities heavily involve relevant industries in the region to advise on development of the programs for them and in defining the competencies of the graduates. Recommendations of large companies such as Kazakhmys, Kazzinc, ArcelorMittal (Temirtau), Kazakhstan Gharysh Sapary, Kazakhstan Engineering, Kazatomprom, National Centre for Complex Processing of Mineral Resources are reflected in the content of new educational programs. 24 programs have been developed together with international partners based on recommendations of the industry.

Consortium of 11 universities developed partnership with international engineering community – The European Network for Accreditation of Engineering Education (ENAE), European Society for Engineering Education (SEFI), American Society for Engineering Education (ASEE), the International Federation of Engineering Education (IFEES). It is expected that these partners will help universities in the specialized accreditation of engineering and science programs.

Core universities currently have 22 interdisciplinary laboratories that conduct research in priority directions, number of labs will be increased to 48. This allows universities to conduct fundamental and applied research with grant funding and carry out practical research on a contractual basis. Universities also signed contracts with more than 300 companies in Kazakhstan, which determines the strong employment prospects for graduate specialists.

RESEARCH UNIVERSITIES

A concept of the “Research University” has been introduced to increase research and innovation potential of higher education in the country. Ministry of Education and Science plans to designate 5–6 universities (out of 125) as research universities. As of now, Nazarbayev University and National Technical University named after Satpayev have been granted a status of the Research University. These educational institutions are envisioned as centers of research and innovation, and will receive a large share of government research grants.

At this stage there are other contenders for the status of national research university: Al Farabi Kazakh National University, Gumilev Eurasian National University, Karaganda State University, former two of them have already introduced substantial changes and entered the QS World University Rankings, positioned 236 and 345 in 2016.

Research universities will also focus on creation of innovation clusters – technoparks, business incubators, centers for commercialization and technology transfer, venture funds, engineering

⁹ Prepared by Marina Kishkentayeva.

centers that work in close cooperation with relevant industries. Apart from Nazarbayev University Technopark,³ TechnoParks been established in other local universities: one in Kazakh National Technical University named after Satpayev, the other two in Kazakh National University named after Al-Farabi and East Kazakhstan State Technical University named after Serikbayev. Universities also created business incubators and commercialization offices.

INSTITUTIONAL AUTONOMY

Starting from 2014 institutional changes are being implemented in all public universities of Kazakhstan. As articulated in State Program for Education Development 2016–2019, about 50% of the public universities will follow the pattern of Nazarbayev University and will gradually receive academic freedom and institutional autonomy; The Program also defines that full academic freedom and institutional autonomy will be granted to the universities which will successfully pass the international accreditation.

The program also indicates that 95% of public universities in the country will have a shared governance system by 2019. Up to now, Advisory Boards comprising of representatives of business, local authorities and community leaders, have been established in public HEIs. Setting up Advisory Boards was a first move towards institutional autonomy of the HEIs, further important task of the universities will be to increase shared governance. *“Universities will have to increase faculty participation in collegial decision-making by reducing possible legal, organizational or cultural barriers”*. (Hartley et al (2015))

The reforms have also begun to put in place new systems of accountability. From 2016 Rector’s work is evaluated based on key performance indicators. Rector has to present annual reports on university activities to the public.

Further on, the universities will be given a right to establish Endowment Funds. As of 2010, only Nazarbayev University was allowed to have an endowment. In 2012, Kazakh National University was allowed to establish an alumni fund (Hartley et al (2015)).

NU’S CONTRIBUTION TO THE CURRENT CHANGES

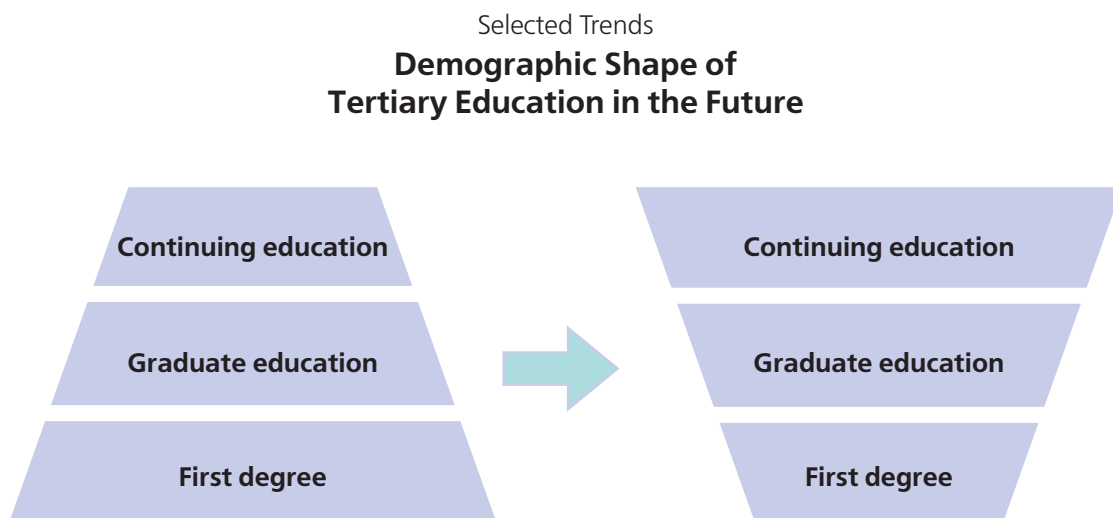
Since its establishment, NU has been seen as part of Kazakhstan’s larger education reform agenda, its role in shaping current higher education environment was substantial. Translation of NU experience is carried out on an ongoing basis through trainings, seminars, workshops, including during the annual Eurasian Higher Education Leaders Forum, as well as through joint research projects. Over the course of 2013–2016 NU provided trainings to senior officials of public universities, and mid-level managers to help them to manage the complex process of transformation in higher education, to enable them to understand system, environmental, institutional changes that take place during the transition to institutional autonomy. About 300 executives from 34 national and regional universities have participated in the trainings under this program since then.

In support of the Ministry of Education and Science’s efforts to modernize the country’s education system, NUGSE, international experts and faculty from Cambridge University and University of Pennsylvania developed a Roadmap for Education Development in Kazakhstan 2015–2020. Recommendation from the Road map had been reflected in the new State Program for Education Development 2016–2019.

PART II. FUTURE HIGHER EDUCATION ENVIRONMENT IN KAZAKHSTAN

In positive scenario – by 2020 NU will continue its flagman-ship role; the research universities and 11 core universities in the country will follow NU’s pattern. A portion of public universities will have institutional autonomy after being internationally accredited, and almost all universities – both public and private will have established shared governance systems. It is also expected that at least 2 universities appear among top ranked 200 universities in QS World University Ranking by 2020. Beyond 2020 –most probably NU will continue to be looked as a national resource that sets the tone and leads the changes in higher education.

There are different opinions on how the future of the universities will look like worldwide, as higher education landscape is getting more complicated and uncertain. Some academics foresee that the universities in the traditional form may disappear in the future, there will be no groups and departments, education will be more personalized and lifelong learning will be a basic principle of higher education. Student will need less time to complete higher education.



Source: OECD (2010)

Many university administrators and academics agree that universities will continue to be knowledge and research generators, more interdisciplinary efforts will be supported, analytical mind becomes appreciated. Academics will still be needed to teach and conduct research. Challenges for universities will be to determine what will be the right balance is between technology and human contact. (Times Higher Education 2015)

LIST OF LITERATURE:

1. State Program for Education Development 2016–2019
2. State Program for Industrial and Innovative Development 2016–2019
3. Ministry of Education and Science (2015) Annual Report on Education Development
4. Matthew Hartley, Bryan Gopaul, Aida Sagintayeva (2015) “Learning autonomy: higher education reform in Kazakhstan”
5. Times Higher Education (2015) “Future Perfect: what will universities look like in 2030?”
<https://www.timeshighereducation.com/features/what-will-universities-look-like-in-2030-future-perfect>
6. OECD(2010) <http://www.slideshare.net/OECDDEDU/oecd-mihaylo-porto-alegre-final>

APPENDIX E: SALMI'S¹⁰ "PITFALLS" (OR ILLUSIONS)

1. Build a magnificent campus; expect magic to happen
2. Design the curriculum after constructing the facilities
3. Import all the content from somewhere else
4. Design with an OECD ecosystem in mind, but implement in a challenging environment
5. Delay putting in place the governing board and appointing the leadership team
6. Stack the board with political appointees
7. Plan for up-front capital costs, but pay little attention to long-term financial sustainability
8. Engage in mergers for the wrong reasons
9. Be too ambitious in the quantitative growth targets
10. Think that everything can be accomplished in 18 months
11. Rely exclusively on foreign academics without building local capacity
12. Neglect to integrate your foreign students
13. Focus on the global research scene at the expense of the local environment
14. Be obsessed with rankings

¹⁰ Jamil Salmi is an international expert in the field of higher education, the author of the book "Challenge of Establishing of World-Class Universities", "The Road to Academic Excellence: the Making of World-Class Research Universities"

APPENDIX F: INTERNATIONALIZATION

“Internationalization at the national, sector and institutional levels is defined as the process of integrating an international, intercultural, or global dimension into the purpose, functions or delivery of postsecondary education” (Jane Knight, 2015).

In today’s globalized world and linked economies, not only money, trade, communication, and technology are fleeing across borders, but so do knowledge and skills. Today close to 5 mln. students are studying outside their home countries, twice times more than 2.1 mln. about ten years ago. The G20 countries enroll 82% of all international students.”¹¹

There is a growing competition among higher education institutions in the world for the best-talented students, faculty, scientists, administrators, and financial resources. An institution with a vibrant and open environment is essential to the flow and exchange of multiple ideas, cultures, cross-border and -discipline collaborations and research. The rationale behind internationalization lies in being connected to the changing local and global environments, embracing international perspective, providing relevant education, research, and services. How to create such an environment? What needs to be done and developed?

One relevant definition states that “Internationalization is the process of integrating an international/ intercultural dimension into the teaching, research and service functions of the institution.”¹² Philip G. Altbach states internationalization as a strategy for an institution “to respond to the many demands placed upon by globalization, and as a way for higher education to prepare individuals for engagement in a globalized world.”¹³

Internationalization for Nazarbayev University goes beyond student and faculty mobility and covers large-scale activity related to the University academic, research and innovation activities. Including administrative excellence, cross-border collaborations; being connected and competitive; having internationalized and relevant curriculum and research; possessing language, area and regional studies expertise; bringing the University to the international education and research arena; recognition of the Nazarbayev University quality internationally and attracting international students and scholars; and streamlining governance structure, campus environment, support services and policies.

For students internationalization is expressed in being competitive in global labor markets, understanding international issues, the ability to collaborate and communicate in an international/ intercultural environment, possessing knowledge of foreign languages, latest professional skills, and technologies in the areas of specialization, being exposed and aware of other countries and regions.

However, taking into consideration the current state of development and existing resources, the next step for the years ahead will be to establish a more comprehensive, systematic, thorough and detailed approach towards internationalizing and developing NU at the same time.

¹¹ ICEFBerlin 2015 Workshop magazine, p.43

¹² Knight, J. (1994) Internationalisation: elements and checkpoints. Canadian Bureau for International Education, Ottawa.

¹³ “Trends in Global Higher Education. Tracking and Academic Revolution.” Philip G. Altbach, Liz Reisberg and Laura E. Rumbley. Sense Publishers, UNESCO Publishing 2010. pp.23–24

INTERNATIONALIZATION VISION

“Leading and globally connected university of choice for education, research, and innovation located in Eurasia”.

PRIORITIES FOR INTERNATIONALIZATION

1. Internationalization of governance and structures
2. Strengthening and leveraging strategic partnerships
3. Promoting international diversity and academic mobility
4. Curriculum internationalization
5. Strengthening research collaborations
6. Creating competitive advantage and continuous international benchmarking.

OVERVIEW PROGRESS REPORT SINCE 2017 ON NU INTERNATIONALIZATION

NU launched the following aspects of Internationalization since the beginning of 2017:

1. Internationalization of governance and structures:
 - NU Board of Trustees included two new international members, since May 2017 includes 50% international members
 - NU’s Board of Trustees established a Committee on Internationalization in June 2017
 - School Boards also included international members, whereas Graduate School of Business established International Advisory Board
2. Strengthening and leveraging strategic partnerships:
 - Existing strategic partnerships are shifting to the next phase, including developing academic student exchange
 - NU became a member and co-founder of Alliances in Asia: Asian Universities Alliance in 2017 and University Alliance of the Silk Road in 2016
 - NU increases its presence and participation in professional Associations and now is a part of 28 professional associations, started sharing its practices via prominent regional Professional associations of international Education like AIEA, EAIE, IAU, etc.
3. Promoting international diversity and academic mobility (as of August 2018):
 - 75% of faculty are international from 55 countries
 - 35 international students from 18 countries
 - Organized 5 and 8 summer schools in 2017 and 2018 respectively
 - A gradual increase in student exchange with strategic partners, Erasmus+ and negotiations with other partners
 - Established international recruitment team
 - Promoting NU Brand, participating in Exhibits, increased work with media internationally
 - Established eight international alumni chapters

4. Curriculum internationalization:
 - Annual review of curriculum with modifications and benchmarking
 - Preparation to international program accreditation
 - Core curriculum (general education) was introduced at bachelor level
5. Strengthening research collaborations (as of August 2018):
 - NU researchers collaborate with more than 350 international institutions
 - NU is number 1 in CIS in international research collaboration (71% of publications)
 - NU researchers collaborated with 712 international institutions
 - 852 co-authored international publications
 - 11.7% of publications in the top 10% most cited publications worldwide
6. Creating competitive advantage and continuous international benchmarking:
 - developing language and area studies expertise (MA in Eurasian Studies
 - Summer School in Russian and Eurasian Studies)
 - Went through the review of Institutional Evaluation Program by the European University Association in August 2017

Further efforts and measures for sustaining and developing the priority directions in internationalization will be taken continuously.

