

**Areas under assessment in higher education:
Quality monitoring system and higher education system development and
in Latvia**

Re: Benchmarks for Activity 3.2.2

1. Introduction
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3. Graduates Register and KPIs as a part of National Information System
4. The Long- term objectives and related KPIs to the HE system development included in the national planning documents
5. The long-term goals of the Latvian HE system are closely related to the goals set within the framework of the Bologna Process
6. 'The priorities of the Guidelines for Science, Technology Development and Innovation 2014-2020' setting the following objectives

1. Introduction

The benchmark of Activity 3.2.2. (3) is “elaboration of a **model of monitoring quality of higher education institutions** relying on a list of Key Performance Indicators **for Azerbaijan** is elaborated, considering best EU practices and the local context specificities”.

The establishment of education **Quality monitoring system** in Latvia is one of the political priorities set in the Guidelines for the Development of Education for 2014-2020 accepted by Cabinet of Ministers of Latvia.

In addition to the HE Quality monitoring system there are:

1. Long- term objectives and KPIs related to the HE system development included in the national planning documents;
2. The objective and KPIs for Graduates performance monitoring been introduced as a part of quality monitoring system under Graduates Register (as a part of National education information system);
3. The long-term goals of the Latvian HE system are closely related to the goals set within the framework of the Bologna Process where the objectives are set, and performance monitored;

4. There are priorities of the Guidelines for Science, Technology Development and Innovation 2014-2020 setting the objectives and KIPs for research and technology performance;

The above-mentioned areas of assessment of quality and performance of HE system are supplemented with:

- The areas of performance assessment of and KPIs of HEIs for institutional accreditation purposes;
- The areas of performance assessment and KPIs for study direction (s) and study program (s) levels for licensing and accreditation procedures;
- The requirements and KPIs for assessment of HEIs as scientific institutions;

Please find below the objectives and KPIs for:

1. **Quality monitoring system**
2. **Graduates Register KPIS**
3. **Long- term objectives and related KPIs to the HE system development included in the national planning documents**
4. **The long-term goals of the Latvian HE system are closely related to the goals set within the framework of the Bologna Process**
5. **The objectives for research and technology performance**

The main focus of this document is the performance assessment on the national system level, therefore, the areas of performance assessment and KPIs of HEIs for institutional accreditation purposes and the areas of performance assessment and KPIs for study direction (s) and study program (s) levels for licensing and accreditation procedures, as well the requirements and KPIs for assessment of HEIs as scientific institutions were not included.

2. The Higher education quality monitoring system, its dimensions and KPIs

The main aims of **Higher education quality monitoring system** are:

- **To create a tool for monitoring the implementation of a public contract** (the parties higher education system and society);
- **To support the quality improvement of the higher education sector** (compliance with objectively determined requirements and responsiveness to the needs of stakeholders).
- **To provide framework for the setting of measurable targets and a mechanism for monitoring the achievement of these targets**, (both in the long term and on the basis of indicators that can indicate progress towards the long-term goals of higher education in the medium and short term).

The main tasks of quality monitoring system are:

- To assess whether the quality objectives of higher education are and will be achieved

- To analyse and evaluate causal relationships between measurable results, indicators and long-term goals today
- To make sure that the set indicators (quantitative and qualitative) are achieved and to determine the necessary corrective actions to ensure the achievement of the set goals
- To provide information for making an informed decision on the allocation of resources between the higher education system and other needs, as well as within the higher education system itself
- To provide information to inform the public about the use of its resources in the higher education system.

The HE quality monitoring is an ongoing process based on:

- The collection of full-fledged information on the quality of HE and the dynamics of its indicators
- The analysis of the information obtained
- The implementation of corrective actions through the implementation of evidence-based policy instruments

The Higher education quality dimensions and KPIs applied (see Table 1)

Table 1 The Higher education quality dimensions and KPIs applied:

	Quality dimensions	KPIs for monitoring quality
1.	Students	1. Number of students 2. Results of students' centralized exams 3. Demographic structure of students
2.	Academic staff	4. Proportion of doctors 5. Ratio of academic staff to number of students 6. Professional development activities 7. Age structure of the academic staff 8. Involvement of master students, doctoral students, new doctors in academic work
3.	Resources	9. Funding per student 10. Capital investment as a share of total expenditure 11. Area of study rooms 12. Infrastructure quality
4.	Study and study work	13. Number and proportion of graduates 14. Graduates who continue their studies in the next cycle 15. Reasons for termination of studies 16. Proportion of diplomas obtained on time 17. Students' evaluation of the quality of studies

5.	Learning outcomes	<ul style="list-style-type: none"> 18. Unemployment rate of graduates 19. Employment in the field of studies 20. Employment at the level corresponding to the qualification 21. Average salary of graduates 22. Number of enterprises established by graduates 23. Number of <i>awarded</i> final theses 24. Study impact indicator
6.	Research and artistic creation	<ul style="list-style-type: none"> 25. Number of scientific publications 26. Student research 27. Involvement of students in research 28. Citation of publications 29. Proportion of top 10% of cited publications 30. Income from scientific activities 31. Number and financing of artistic works 32. Total research productivity
7.	Cooperation and internationalization	<ul style="list-style-type: none"> 33. Joint publications with industry 34. Patents & patents normalized 35. Patents developed in collaboration with industry 36. Spin-off numbers 37. Revenues from the private sector 38. Study programs in a foreign language 39. Study programs that award joint degrees in cooperation with foreign partners 40. Proportion of foreign teaching staff 41. International joint publications 42. Mobility of incoming students 43. Outgoing student mobility 44. Mobility of academic staff
8.	Management structure	<ul style="list-style-type: none"> 45. Student's involvement on governance structures 46. Employers involvement
9.	Strategy	<ul style="list-style-type: none"> 47. Link with the work environment 48. Income from lifelong learning activities
10.	Regulatory framework	<ul style="list-style-type: none"> 49. Measures to ensure equal access 50. Internal operating conditions of a higher education institution

3. Graduates Register

Table 2 Graduates Register KPIS:

1.	Number of employed
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	Number of unemployed and job seekers
2.	Number of economically inactive persons
3.	Number of emigrants
4.	Average monthly income
5.	Employment sector
6.	Profession
7.	Number of graduates in regions

4. Long- term objectives and related KPIs to the HE system development included in the national planning documents.

In accordance with the Guidelines for the Development of Education for 2014-2020, the following objectives of education policy have been set:

- To increase the quality of the educational environment by improving the content and developing the appropriate infrastructure;
- To promote the development of value-based individual professional and social skills for life and a competitive work environment;
- To improve the efficiency of resource management by developing the institutional excellence of educational institutions

The Long- term objectives and related KPIs to the HE system development included in the national planning documents (see Table 3)

Table 3 Long- term objectives and related KPIs to the HE system development included in the national planning documents

	Policy outcome	KPIs
1.	Investment in R&D 1,5 % of GDP in 2020	Number of students with degrees or qualifications in higher education institutions and colleges (thsd persons) Proportion of population aged 30-34 with higher education
2.	Restructured state support for higher education sciences (study fields) in accordance with medium-term labor market forecasts.	Proportion of budget places STEM, % of the total number of budget places Proportion of students in 1st level professional higher education programs (college level programs), %.
1.	The educational process is provided in accordance with the changing requirements of the labor market	Persons aged 15-24 - jobseekers not involved in education, %. Unemployment rate of graduates 18 months after graduation, as a percentage of the unemployment rate of graduates of all educational institutions.

		Proportion of graduates in STEM fields from the total number of graduates, %.
4.	The professional competence of teachers and academic staff in accordance with the requirements of modern education will increase	Academic staff (excluding colleges) proportion with doctoral degree, %.
5.	Increased professional competitiveness of academic staff	<p>Proportion of the age structure of the academic staff (aged 30-49), % of the total academic staff</p> <p>Proportion of doctoral degree holders, (% of the total number of degree or qualification holders).</p> <p>The ratio of the lowest salary rate of professors of higher education institutions to the amount of the average monthly salary of employees in the country published in the official statistical bulletin of the CSB.</p> <p>Number of doctoral students in joint doctoral study programs</p>
6.	Improved higher infrastructure of educational institutions for the implementation of a modern study process.	<p>The number of first level professional higher education students in colleges in STEM programs has been increased</p> <p>Higher education proportion of institutions, % of the total number of modernized equipment and technical infrastructure using ERDF funds</p> <p>Higher education proportion of institutions (%) of the total number offered by e-studies using modern e-platforms</p>
7.	A career development support system has been established and the availability of services has been ensured	Total number of educational institutions where career education services are available
8.	Increased involvement of adults in educational activities	Increase in the number of persons for whom the professional competencies acquired outside the formal education system have been equated, cumulatively per year, including basic indicators, %

9.	Provided uniformed education quality monitoring	Growth "Education in the comparative ranking of the countries of the "EFA Development index" index Proportion of educational institutions involved in educational quality monitoring, %
10.	Support for HEI studies direction management improvement, incl. colleges, and the establishment / development of an effective monitoring system for the implementation of HEI policy and education quality assurance, aimed at developing policy analysis capacity in HEIs and scientific institutions	Study direction councils are set up and working
11.	The availability of educational services has increased	Higher education: share of population in age group 30-34 years (with higher education),%
12.	Internationally competitive higher education environment is secured	Proportion of foreign students (within mobility) from the total number of students, %. Proportion of foreign students studying for a degree from the total number of students, %.
13.	Opportunity to participate in internationally recognized higher education accreditation is provided.	Number of study programs that have obtained international level quality documents (international accreditation).
14.	Foreign students attracted	Number of scholarships awarded to foreign students per year
15.	Secured professional development of teachers, academic staff, adult education staff and exchange of international experience.	Academic staff Number of participants in mobility activities
16.	International teaching and study practice is provided.	Number of universities participating in mobility activities Proportion of university graduates who have studied or had an internship abroad within the study, out of the total number of graduates, %.

5. The long-term goals of the Latvian HE system are closely related to the goals set within the framework of the Bologna Process

To measure the achievement of the goals set by the Bologna Process, 13 indicators have been identified, the fulfillment of which is assessed for each Member State.

According to the Bologna Process, Latvia's goal is to achieve the highest long-term rating in each of the following criteria (see Table 4)

Table 4 Status of implementation of Bologna process requirements and indicators in

Latvia

	Requirements	Indicators
1.	Stage of implementation of the first and second cycle (% of students studying in programs corresponding to the Bologna process)	At least 90% of students study in Bologna-compliant programs
2.	Next cycle access (percentage of first cycle programs providing access to at least one second cycle program)	A full first cycle qualification provides access to second cycle programs, and a full second cycle qualification provides access to at least one third cycle without significant transition issues.
3.	Implementation of the national quality framework	The framework has certified compliance with the European Higher Education Area (EHEA) Qualifications Framework
4.	Stage of implementation of the European Credit Transfer and Accumulation System (ECTS) Introduction of diploma supplements	All HE programs are awarded ECTS credits
5.	Introduction of diploma supplements	All graduates receive a diploma supplement in EU / CoE / UNESCO format free of charge and automatically
6.	Openness to international quality assurance of agencies registered in the European Quality Assurance Register for Higher Education (EQAR)	All HEIs and HEI programs can choose to be evaluated by a foreign external quality assurance agency, according to national requirements.

7.	The external quality assurance system implementation stage	A fully functioning quality assurance system operates throughout the country. The Quality Assurance Agency has been successfully evaluated against the European Standards and Guidelines (ESG) by the EHEA. The quality system applies to all institutions and / or programs and covers the following key issues: 1. Teaching; 2. Student support services; 3. Internal quality assurance / management system.
8.	Involvement of students in the external quality assurance system	Students participate in quality assurance activities at five levels: 1. In the governance structures of national quality assurance agencies; 2. As full members or observers of external evaluation teams; 3. Preparation of self-assessment reports; 4. in the preparation of the external evaluation report; 5. Follow-up procedures
9.	International involvement in the external quality assurance system	The following four aspects are met: 1. Agencies are full members of ENQA and / or are included in the EQAR list; 2. International experts participate in the management of national quality control organizations; 3. International experts participate as participants / observers in the evaluation teams; 4. International experts shall participate in the follow-up procedures.
10.	Measures to support the participation of disadvantaged students	Financial support for disadvantaged students or general education support with the necessary resources for more than 50% of students; Quantitative policy objectives for the participation and / or education of disadvantaged students

		Monitoring the participation and educational attainment of disadvantaged students.
11.	Recognition of prior learning	The country has established procedures, guidelines or policies for the assessment and recognition of prior learning as a basis for: 1) access to higher education programs and 2) the award of credits to qualifications and / or exemptions from certain program requirements, and these procedures are widely used in practice.
12.	Portability of public grants or guaranteed loans	Full portability to the EHEA through all available national student support measures - grants and / or loans - in credit points and degree mobility. Equivalent requirements for government grants and / or loans if students study in their home country or abroad
13.	Supporting the mobility of disadvantaged students	Financial mobility support for disadvantaged students or transferable grants for disadvantaged students or principal transferable grants awarded as required

6. The priorities of the Guidelines for Science, Technology Development and Innovation 2014-2020'

The aims of the science, technology and innovation development policy:

- Modernize and integrate the research and education sectors by increasing their capacity to respond to future challenges in research, technological development and innovation and by increasing the mobility of the education sector;
- Support research in higher education (HE investment).

Lines of activity "Advanced research, innovation and higher education" NDP 2020 puts forward the following objectives:

- Investments in research and developments of 1.5% of gross domestic product in 2020 by targeted promotion of attraction of human resources, development of innovative

ideas, development of research infrastructure, cooperation of higher education, science and private sector, as well as transfer of research and innovation in the business;

- By commercialisation of knowledge, to foster creation and introduction into production of innovative, internationally competitive products with high added value, thus increasing the output of products mentioned the proportion of the national economy.

Following target is nominated for Smart Specialisation Strategy:

- To increase innovation capacity and establish innovation system fostering and supporting technological progress of national economy.

Therefore, it is necessary to form globally competitive Latvian science, technology and innovation industry that could support the needs for development of the national economy and society.

Sub-targets:

- To develop human resource capital of Science, Technology and Innovation sector, by increasing the number of people employed in scientific research institutions and the business sector at least up to 7000 by 2020, focusing the increase in the identified knowledge specialisation areas;
- To increase the proportion of high and medium technologies;
- To promote the international competitiveness of Latvian science by focusing research in smaller number of larger and stronger institutions, promoting the increase the number of scientific articles published in a recognised international databases up to 1500 articles and number of inventions up to 50 intellectual property units a year;
- To modernize and integrate research and education sectors, increasing their ability to respond to future challenges in research, technology development and innovation, and increasing the mobility of education sector;
- To increase the return on investment of scientific institutions in research and development, creating a more efficient transfer of knowledge and technology environment
- To strengthen the innovation capacity of enterprises through the development of the demand for new knowledge and technologies, and promoting private sector investment in R&D, ensuring that by the year 2020, at least 48% of the total investments in R&D is made by the business sector;
- To optimize the management of science, technology and innovation sector, ensuring an effective coordination and increase of R&D investments;
- To create a demand for science and innovation, informing the public about the scientific accomplishments and promoting innovative activities and development of technologies.

List of literature:

1. HIGHER EDUCATION QUALITY MONITORING SYSTEM CONCEPT, SIA Fidea, 2019
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3. The priorities of the Guidelines for Science, Technology Development and Innovation 2014-2020' (2013)
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<https://s3platform.jrc.ec.europa.eu/documents/20182/227021/Guidelines+for+Science+Technology+and+Innovation+2014-2020.pdf/d96566cd-e61b-471b-9f80-4d06236037b4>