



IF₄TM

Institutional framework for development
of the third mission of universities in Serbia



Metrics for monitoring the third mission activities





IF4TM

D.6.2 Metrics for monitoring the third mission activities

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Abstract	Deliverable of Act. 6.2: Metrics for monitoring of third mission activities; presents a list of indicators to measure Serbian HEI's third mission activities
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D6.2 Metrics for monitoring of third mission activities

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Introduction

The metrics for monitoring the third mission activities have been elaborated in the second and third year of project implementation. The project team of DUK, QAPT team and three working group members (WG2, WG3, WG4 within this project) have defined the set of metrics in order to measure the progress of implementation of all three dimensions within third mission at Serbian HEIs. Besides these, the teams have also defined the mechanisms for the collecting, monitoring and analysing of these indicators. The



results of this document will be incorporated into the first version of Operational Manual for third mission implementation. This list of metrics will be updated and revised until the end of the project based on experience from implementing third mission activities within IF4TM. The final list with statistics and graphical presentation of monitored metrics will be presented in the Final Monitoring Report for Third Mission Activities.

Methodology for the selection of metrics

The metrics for monitoring of third mission activities have been developed

- Based on results from international research on the topic
- In a multi-level process
- Jointly by Serbian and international project partners.

The most important **theoretical source** for this document are the results of the European E3M project, which has been realised under the Lifelong Learning / Eurydice scheme, led by the Polytechnic University of Valencia in partnership with Danube University Krems and a six other universities.

The document also reflects the indicators as used for the U:Multirank ranking, and for the metrics part of the intellectual capital reports that Austrian universities have to produce on an annual basis. Additionally, current developments in the governance of third mission and responsible science at the Austrian science ministry have been reflected in the compilation of this report.

The process to develop this document has taken **various steps**:

- 6.2.1. Proposed structure for D6.2 Metrics for monitoring the third mission activities (DUK, UNI, UKG)
- 6.2.2. Comments from partners on proposed structure of the report (all)
- 6.2.3. Final structure of deliverable (DUK)
- 6.2.4. First proposal of metrics for TM activities (DUK)
- 6.2.5. Serbian HEIs inputs on proposed TM metrics / list of indicators (WG2, WG3, WG4)
 - Result: an overview which metrics would be available or could be made available in the future
- 6.2.6. Sending the D6.2 List of indicators to DUK (UKG)
 - Result: a list of metrics, categorized in “keep”, “skip” and “discuss”
- 6.2.7. Elaboration of draft of D6.2 report (DUK)
- 6.2.8. Partners comments (all)
 - Serbian universities and DUK of metrics during the visit to Krems, February 2018
- 6.2.9. Final D6.2 report (DUK)

The metrics reflect the **feedback by all** Serbian higher education institutions in all their heterogeneity, i.e. university vs. technical college of applied studies, public vs. private, loosely-coupled vs. integrated, urban vs. rural. Theoretical input and institutional experience has been shared by Danube University Krems.

Significance and prioritization of metrics

In the definition of metrics, the following criteria have been set to assure a good selection of indicators:

- **Availability of data**
 - Preference is given to those indicators for which the data is already available or can be easily made available.
 - The amount of data to be collected from single employees of higher education institutions should be kept to the absolute minimum, in order not to over-burden academic staff with bureaucratic issues and assure academic staff's openness to provide data.
- **Methodological quality of indicator**



- Preference is given on indicators that represent an output or throughput, not inputs
- A clear definition of the indicator should be possible, so the data of various units and institutions is comparable
- **Variety of indicators**
 - The set of indicators is structured according to the three dimensions of third mission, i.e. continuing education, technology transfer & innovation, and social dimension
 - Each sub-set should cover a maximum of sub-fields defined for each dimension
 - A comparison of indicators across the three dimensions assures that a broad picture is provided
- **Adapt to Serbian needs**
 - The selected indicators reflect the socio-economic setting in Serbia,
 - and the institutional capacities of Serbian higher education institutions in this regard.

Collect, monitor and analyse data

To achieve change on system level, it is necessary that a national player (e.g. the ministry, the accreditation agency) defines a set of metrics together with deadlines when the higher education institutions have to provide the data. If there is already a set of key performance indicators to be communicated by Serbian universities, it would be cost-saving to include metrics on third mission into the existing set.

To facilitate the establishment of the system, a person competent in statistics should be the main contact point. As there might be still open questions regarding the definition and interpretation of the metrics and the underlying data, a steering committee with representatives from Serbian higher education institutions should be available beyond the IF4TM project.

Metrics should be collected on an annual basis. The results should be published and made available in formats that allow further use for analysis and research.

Set of Metrics

Accompanying a mandatory core set of metrics for all higher education institutions, there is a set of voluntary metrics for use on institutional level. To keep the system manageable, the core set had a target amount of 6 metrics, the voluntary set for the institutional level had target amounts of 3 x 5 indicators, though could be reduced to five indicators each for continuing education and technology transfer & innovation, and two for social engagement (as this field is particularly difficult to measure).

Continuing Education

Core Set – Continuing Education

CE 1: Number of CE programs realised this year as a percentage of the total number of study programs

Does only list programs that have taken place, hence excludes programs that were developed but have not started or that have been offered but did not reach the minimum number of participants. Answers should be provided in the categories (1) not ECTS awarding programs, (2) programs awarding 1 – 29 ECTS, (3) short-cycle programs (30 – 60 ECTS). Under study programs, each realised regular bachelor or master program count as one.

CE 2: Number of CE participants this year as a percentage of the total number of students

Head count of participants in continuing education, CE participant as defined by Serbian legislation, as a percentage of the total number of students as defined by the Ministry (the latter number excludes CE participants).



Voluntary Set – Continuing Education

CE 3: Existence of Continuing Education in the university strategy and action plan

Is continuing education mentioned in the university strategy? Does the university have an action plan how to implement strategic goals in continuing education?

CE 4: Quality Assurance for Continuing Education

Does the university have dedicated rules on quality assurance for continuing education?

CE 5: Number of ECTS awarded to participants as a percentage of the ECTS awarded to regular students this year

The total sum of all ECTS awarded in continuing education by the university, divided by the total number of ECTS awarded (regular programs without continuing education programs)

CE 6: Earnings from continuing education per total number teaching staff in FTE

Total amount of money earned through all continuing education programs of the university in the reporting year, measured in dinars, divided by the total number of teaching staff (full-time equivalent)

CE 7: Number of CE programs with external approval (e.g. accreditation) as a percentage of the total number of CE programs

Number of CE programs that have received accreditation. (Approval after an external quality procedure, e.g. a program accreditation from a national or international agency, a quality label from trade organisations, approval by a Ministry (e.g. of Health). External approvals that are transferred automatically without any quality procedure are excluded.) This is divided by the number of short-cycle CE programs as given in indicator CE1.

Technology Transfer & Innovation

Core Set – Technology Transfer & Innovation

TT 1: Income from licences per researcher (full-time equivalent)

The total amount of income gained through licensing university knowledge, measured in dinars, divided by the number of researchers of an institution measured in full-time equivalent

TT 2: Number of hours taught by industrial lecturers as a percentage of teaching hours in regular programs

For this indicator, “industrial lecturer” is defined as a person who is self-employed or employed by an organisation (including companies, NGOs and government bodies, excluding public and private higher-education institutions or research institutes). The number of hours includes in-class contact hours and excludes one-on-one counselling. Teaching hours in regular programs counts contact hours in bachelor and master programs excluding CE programs.

Voluntary Set – Technology Transfer & Innovation

TT 3: Number of patents per researcher (full-time equivalent) ± total and new

The total number of patents, national and international, held by the university, and thereof the number of patents newly gained during the reporting year; divided by the number of researchers of an institution measured in full-time equivalent

TT 4: Number of spin-offs established this year per researcher (full-time equivalent)

In this context, a spin-off is defined as a company that uses research results, and therefore either the university or a faculty owns a stake in this company, or the university has given official allowance to a researcher to start this company.

TT 5: Earnings from contract research per researcher (full-time equivalent)

The amount in dinars earned by the university within the reporting year through contract research. In this context, contract research is defined as a cooperation between the university and an external non-academic partner where the university performs research against money; external non-academic partners



include companies, NGO, and government institutions but exclude higher-education institutions, research institutes, research funds, EU framework programs, etc.). This amount is divided by the number of researchers of an institution measured in full-time equivalent.

TT 6: Number collaborative research agreements with companies where technology transfer is included per researcher (full-time equivalent)

Total number of contracts between the university and profit-seeking companies where both partners jointly do research, and the research result should be commercialised by the company. The number includes all valid contracts, also those signed in earlier years but still active.

TT 7: Number of contracts for access to university space, facilities, equipment and services per researcher (full-time equivalent)

Total number of contracts between the university and non-academic partners (as defined above) that regulate the use of university facilities by the externals; these facilities include machinery and instruments, laboratories, class-rooms etc. Services include various aspects of university administration (like IT services, library use, facility management, payroll, financial management, etc) but excluded contract research or teaching.

Social Engagement

Core Set – Social Engagement

SE 1: Students from the Roma community as a percentage of the total student number

The total number of students from the Roma, Sinti or Egyptian communities as a percentage of the total number of students

SE 2: Students with handicap as a percentage of the total student number

The total number of students with physical disabilities as a percentage of the total number of students

Voluntary Set – Social Engagement

SE 3: Mention of social engagement in the mission of university

Does the university mission mention the institutional role in developing the society?

SE 4: Percentage of faculties or departments that have an active council of employers

The number of university sub-units that have a council of employers that has been officially established and that has met minimum two times during the reporting year, expressed as a percentage of the total number of sub-units. The relevant sub-units are faculties or departments for the larger universities, and departments or equivalent for other higher-education institutions. The council of employers is defined by Serbian legislation.

Recommendation to the Ministry

The IF4TM project recommends to the Serbian Ministry of Education, Science and Technological Development to add six metrics (descriptors and indicators) to the reporting instruments of higher education institutions. This set of metrics represents a fair trade-off between the wide range of third mission activities and efficient governance structures.

This core set of mandatory metrics to be provided by all higher education institutions in Serbia is:

- CE 1: Number of CE programs realised this year as a percentage of the total number of study programs
- CE 2: Number of CE participants this year as a percentage of the total number of students
- TT 1: Income from licences per researcher (full-time equivalent)
- TT 2: Number of hours taught by industrial lecturers as a percentage of teaching hours in regular programs



- SE 1: Students from the Roma community as a percentage of the total student number
- SE 2: Students with handicap as a percentage of the total student number

The Ministry should name one contact person competent in statistics for this matter. A steering committee should be in place to decide on open issues that might appear in implementation.



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