



Evaluation Report

University of Ljubljana

Faculty of Computer and Information Science

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Abbreviations:

ASIIN	=	Agency implementing the present evaluation procedure
AT	=	Audit Team
ERU	=	Education and Research Unit
FRI	=	Faculty of Computer and Information Science
HE	=	Higher Education
HEI	=	Higher Education Institution
SER	=	Self Evaluation Report (used identical with “Self-Assessment-Report”)
CMQS	=	Committee for the Monitoring of Quality and Self Evaluation
UL	=	University of Ljubljana
QA	=	Quality Assurance

In order to facilitate the legibility of this document, any gender-specific terms used in this document apply to both women and men.

Executive summary

In the framework of project KUL, ASIIN conducted an evaluation at the *UL Faculty of Computer and Information Science* in April 2014, leading to the following report. The report fixes waypoints on a journey towards a fully established quality management in higher education ensuring the institutional, procedural and cultural framework for good teaching and successful learning within the faculty. The evaluation by external peers followed an internal assessment delivering the information base to the external peers. Both, the internal and external assessment in the present evaluation exercise followed a pre-defined and agreed catalogue of evaluation criteria and subsequent assessment questions aiming at quality performance in teaching and learning.

Overall, the major findings and respective recommendations are summarized as follows:

Regarding the criteria on “Definition of quality”

Concerning the evaluation criteria agreed on with UL around the definition of quality for the faculty’s activities and performance, the peers appreciate the strategy presented by FRI. They perceive an elevated level of transparency and integration of internal and external stakeholders in developing this strategy. The faculty presents itself as to be able to self-detect deficiencies in strategic guidance and to react on these deficiencies.

In view of the peers, this is proven in an elevated level of awareness of faculty staff about strategic and quality related issues, which are promoted not at least by the annual pedagogical conference. Although the peers do not doubt that FRI is following the path chosen, there seems to be room for improvement yet. The faculty has already begun to implement a business management approach into its operations – although the respective project is juvenile yet. In view of the peers, this is a highly valuable instrument to strengthen the alignment between the defined objectives and the activities of FRI. They strongly support this project and recommend FRI to emphasize the appropriate activities.

Regarding the criteria on “Educational programmes / courses / trainings”

The peers consider the institutional setting for the development of education programmes to be established and controlled. The faculty shows a high level of awareness concerning the needs of prospective employers and serves this need by the implementation of a few well chosen professional programmes – fulfilling its own need for human resources with a more theoretically based interdisciplinary programme conducted with another faculty.

A drawback in the representation of internal stakeholders in quality management activities is the detected lack of integration of PhD-students: Because of their hybrid status as employees and as beneficiaries of educational provisions, they are presently not integrated into the commissions

responsible for the third cycle. The peers therefore strongly encourage FRI to establish a mode of participation, taking into account the students' hybrid status, ensuring a visible handling of the PhD-students' feedback on quality issues.

With regards to monitoring procedures, there seems to be a dissent between students and FRI concerning the implementation of a course based quality survey – leading student representatives to apply monitoring activities in parallel to the faculty's survey. The peers recommend FRI to establish a consensus avoiding redundant activities. Another option to foster quality monitoring procedures is to strengthen the monitoring of graduates' performance e.g. by implementing an alumni survey in the name of the FRI Alumni Club.

Regarding the criteria on “Management of resources”

With regards to management of resources, the peers consider FRI's institutional setting to be established and controlled. They appreciate FRI utilizing the newly constructed building in alignment to its educational approach – promoting and valuing student competition. Approaches towards the combination of research and teaching are visible.

For further enhancement, the peers recommend FRI to establish a more structured approach towards human resource development. There are offers for staff development available, but in perception of the peers the expectations of the faculty towards the – partly voluntary – attendance of its staff on those offers could become more visible.

Regarding the criteria on “Transparency and documentation”

The peers appreciate the transparent approach of the faculty towards the management of documents and the underlying value of openness and accessibility of information. They think that the institutional setting for the arrangement of documents could be enhanced and become more user specific by structuring documents in connection to internal processes. The peers support the efforts for the implementation of a business management approach within FRI.

A About the Evaluation Process

Evaluation subject	University of Ljubljana Faculty of Computer and Information Science	
Experts	Prof. Dr. rer. nat. Hans-Ulrich Hei (Berlin University of Technology) Thomas Kirchner (Student member: University of Heidelberg) Prof. Dr.-Ing. Richard Korff (University of Applied Science Mnster) Uwe Sesztak (Business representative: Visual Systems Software & Consulting GmbH)	
Representative/s of ASIIN Headquarter	Ass. Iur. Melanie Gruner Thorsten Zdebel, M.A.	
Timeline	Date	Milestone
	06/02/2014	Submission of the final version of the self-evaluation report of the faculty
	16-17/04/2014	Onsite visit of the peer group
	26/06/2014	Submission of the draft evaluation report
	08/07/2014	Feedback by UL FRI on the draft evaluation report
	18/07/2014	Submission of the final version of the evaluation report
Relevant criteria and sources	Criteria for the ASIIN System Seal / Institutional Accreditation / Institutional Assessment: Requirements for Good Teaching and Successful Learning (11/10/12) (used as evaluation criteria) http://www.asiin-ev.de/media/Criteria for the ASIIN System Seal 2012-10-11.pdf Standards and Guidelines for Quality Assurance in the European Higher Education Area (2009) http://www.enqa.eu/wp-content/uploads/2013/06/ESG_3edition-2.pdf	

Description of the evaluation approach

ASIIN considers evaluation as an instrument for organizational development triggered by a two staged process of an internal evaluation followed by an audit of external peers. In the first stage members of the evaluated organisation are asked to implement an internal self-reflection process including relevant stakeholders leading to a self evaluation report (SER). This report states a shared internal understanding or at least the overview on internal views of/on strengths and weaknesses of the evaluated subject. ASIIN then combines an audit team representing suitable expertise concerning the evaluated subject, independency and a good match of the different stakeholder-perspectives engaged with or affected by the evaluated subject. This team reviews the SER and conducts a site visit at the institution, where the SER is validated in discussions with the relevant stakeholders. The findings are compiled in an evaluation report stating strengths and weaknesses from the external view and recommendations towards their enhancement.

In case of the evaluation of an internal quality management system for higher education institutions, the evaluation report and the site visit are structured with the help of the *Criteria for the ASIIN System Seal / Institutional Accreditation / Institutional Assessment*. Overall, this set of criteria is designed for quality development in teaching and learning. It refers to (I) the definition of quality and its management, (II) their application on the educational provisions the Higher Education Institution (HEI) is offering, (III) the management of its resources and (IV) quality related transparency and documentation. Each aspect is considered in an *institutional, procedural* and *cultural* perspective or dimension. The approach is based on a system of so-called maturity levels. This makes for a comprehensive description of the development stage at which the quality management system of the institution presently is. A simplified version of the maturity levels is presented as follows:

0 = non-existent

1 = defined

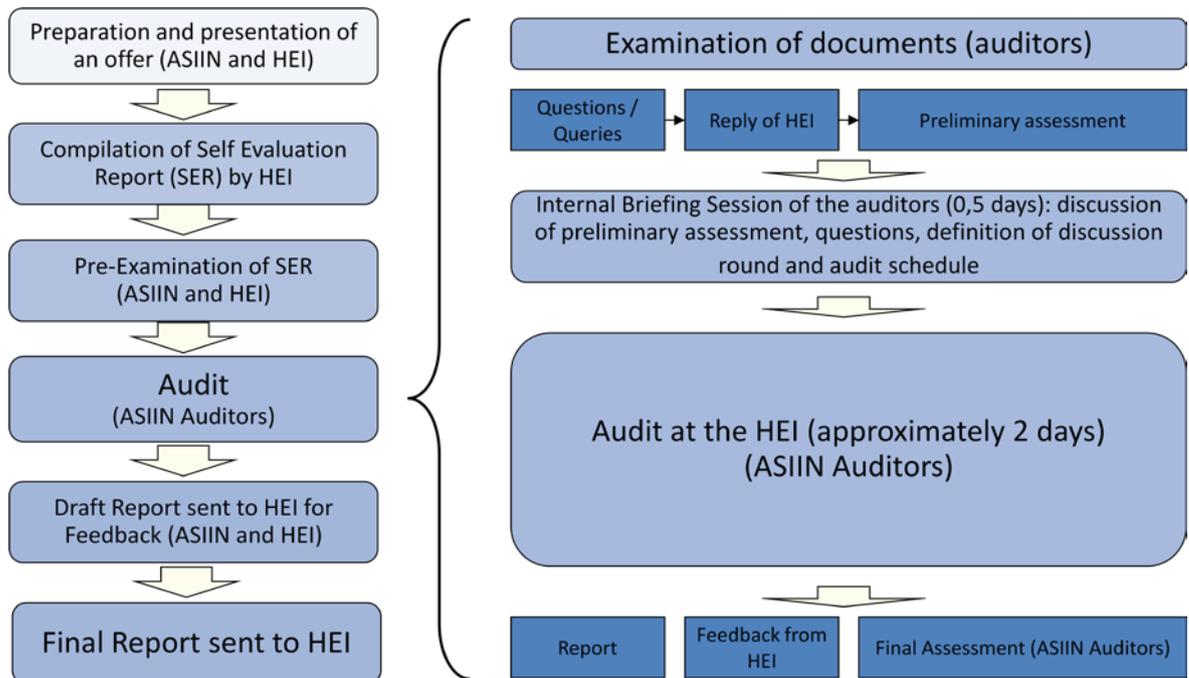
2 = implemented

3 = established and controlled

4 = predictive and proactive

The further report proceeds as follows: After a short executive summary outlining the central findings, a chapter is presented for each evaluation criterion beginning with related questions, the analysis and findings of the peers as well as the respective maturity level of the organization's structures, processes and their interaction with cultural characteristics observed by the peers regarding single criteria. Every chapter concludes with recommendations for further enhancement of quality and organizational maturity.

The ASIIN evaluation process is shown in an idealized version in the chart below:



B Characteristics of the UL Faculty of Computer and Information Science

The University of Ljubljana (UL) is the largest and most renowned university in Slovenia. Due to this unique position within the Slovenian higher education system, UL is committed to a strategy of international excellence in research, education and knowledge transfer.

Departing as a decentralised university, integrating rather autonomous faculties over the past decades, the management of the university looks back at substantial progress towards the definition of common goals shared by all parts of UL. As a reference point for a continuous enhancement process of quality, visibility and feedback-orientation, UL launched the EU funded project KUL ("quality of UL") in 2013. It is dedicated to strengthening existing quality assurance mechanisms (with more integration and more comprehension) and to create new mechanisms (like quality enhancement visits or employee questionnaires) where they are considered to be useful for the stimulation of a coherent quality culture. In KUL, international accreditations and evaluations are foreseen to identify strengths and weaknesses in the faculties' performance and to reveal their causes.

The Faculty of Computer Science and Information (FRI) was founded in 1996, when the previous Faculty of Electrical Engineering and Computer Science was split into two separate faculties. The present Faculty of Computer and Information Science provides research, development as well as undergraduate and postgraduate education in the areas of computer sciences and informatics. FRI has about 1.400 students studying in 5 undergraduate, 4 graduate and 1 doctoral programmes. There are close to 160 full-time employees, close to 135 of them are academic staff. In terms of staff, FRI is a mid-sized faculty within the UL. The faculty is structured into six chairs and several administrative units. FRI reports to follow the recommendations of FEANI in designing its engineering education offers - the umbrella federation of national engineering associations at European level. The study programmes are also holding the label "EUR ING".

Since its foundation in 1996, FRI has undergone rapid growth in number of staff, students and activities. The evaluation is seen by FRI as a chance to correct some negative side-effects of this growth. Actually, FRI is preparing to move into a newly constructed building. This enhances the presently constricted room situation and enables new approaches for a student-oriented infrastructure.

C Analysis and Findings of Peers

I. Definition of quality

Evaluation Criterion I.1: Objectives

Evaluation questions

Institutional dimension: Which (quality-related) objectives exist and how are they defined, structured and fixed?

Procedural dimension: What are the processes to define, to implement, and to review the objectives on a regular basis? Who is involved, who is responsible, and who is informed?

Cultural dimension: Which values and methods are characteristic for the (quality-related) objectives of the institution, both in terms of content and how they are defined and developed?

Analysis and findings of the peers

Being the strongest research-faculty in the respective subjects within Slovenia, FRI is committed to a strategy of international excellence. The faculty orients itself at becoming the leading faculty for computer science and informatics in Central and Southeastern Europe and a renowned faculty worldwide. This vision is broken down into the following specific medium-term-objectives:

Research and development

- provide an infrastructural centre for more successful inclusion in the European Research Area through participation in large EU and other international research projects,
- increase co-operation and synergy among the institutions of the same and other areas of activities,
- establish R&D centres for macro-regions,
- provide conditions for the activities of Competence Centres and Development Centres in Slovenian industry,
- improve conditions for co-operation with Centres of Excellence,
- increase the capabilities for the two-way transfer of knowledge and co-operation between business and public R&D sectors with shared investment and use of up-to-date research infrastructure

Education and training

- raise the quality and effectiveness of education in the first and second cycle study programmes and sensitivity to labour market,

- provide the conditions to raise the quality of doctoral studies and increase co-operation of second and third cycle students in research for/with businesses,
- provide the conditions for better internationalization (more “incoming” and “outgoing” exchange students, graduates, teachers and researchers, especially in various EU schemes), accreditation and the offer of joint programmes and summer schools,
- provide education for under-privileged groups (groups with special needs, regarding socio-economic background, psycho-physical conditions, sex or ethnic origin, etc),
- provide the conditions for the provision of life-long learning.

Common and general objectives

- provide conditions for international accreditation of study programmes by international professional and education associations for the purpose of establishing the international comparability of the degrees and the learning outcomes and profiles of graduates,
- permanently solve the problem of the technical security of the facilities and thus eliminate fire risk according to the safety at work measures and health protection in the provision of pedagogical and research activities and effects on the environment.

These goals are further broken down, to facilitate quality assurance in education as well as scientific research and professional activities (SER p. 11). Asked after the closing of quality loops, the FRI-management mentions the implementation of subject specific courses taught in English (to provide better conditions for internationalisation) and the implementation of tutors to tackle missing prerequisites in programming skills of new students (to raise the quality and effectiveness of education in the first cycle).

With regards to the **institutional setting**, the strategy was prepared by a FRI-working group in 2011 and fixed in a specific document provided as an annex to the SER. The peers can attest the alignment between the FRI strategy and the faculty’s activities (described in Chapter II) – although a repeatedly closed quality cycle is still to be proven due to the juvenile status of the project. An example, depicting the overall impression of the peers on the on-site-visit, is the faculty’s attitude towards internationalization: Although there are legal obstacles complicating the implementation of English language in study programmes, the faculty demonstrates it’s vision by following an English-language-policy in its every-day-operations, resulting in e.g. compilation of key documents in English. In a **procedural perspective**, the Annual Reports included in the SER and the perceived level of awareness of faculty staff concerning quality and its management provides sufficient evidence that the process of defining, implementing and reviewing of objectives is working. A remaining challenge, which the faculty has already begun to tackle, is the implementation of a business process management approach. The peers support this effort aiming at a stronger coordination of processes towards strategic objectives. In a perspective on the **organisational culture**, FRI commits itself to the UL Code of Ethics, which defines the basic values of scientific work. The value guiding strategy development predominantly recognized by the peers is *transparency*. FRI follows an open access policy towards its strategic documents, giving the entire faculty and universi-

ty the opportunity to express their views and opinions before the strategy is adopted by the Senates of FRI and UL.

Levels of maturity observed

In perception of the peers, quality related objectives are visibly implemented into the institutional setting. A repeatedly closed quality cycle has to be proven to achieve the next level of maturity.

This can also be confirmed for the processes to define, implement and review the objectives. To ensure a stronger coordination of activities towards defined objectives, the peers support the already started implementation of business process management for the operations of the faculty. This would be one way to achieve the next level of maturity.

With regards to the organisational culture, the peers are convinced that the guiding values ensure coherent implementation of quality management activities and support the strategic direction of the faculty as a whole.

→ Quality-related objectives...**are visibly implemented (level 2).**

(The next level to attain would be:) ...for teaching and learning have been consistently embedded in a comprehensive system of objectives for the overall organisation which serves as a long-term basis for the future development of the higher education institution. The scope of good teaching and successful learning has been defined and communicated within the higher education institution.

→ The processes to define, implement and review objectives...**are visibly implemented. The responsibilities, participation and information channels are used as envisaged (level 2).**

(The next level to attain would be:)...are structured in a way that allows for the general objectives of the higher education institution and its teaching and learning units as well as the objectives for individual programmes / courses / trainings on offer to be coordinated. The relevant internal and external stakeholders of the higher education institution are included in the process of formulating and developing the objectives on a regular basis.

→ The predominant values and methods which guide most actions...**support the organisation as a whole in strategically directing the processes used to achieve the intended results. The orientation is based on the principle of focusing on the student and on the learning outcomes. Both the students and the teaching staff are at the centre of a quality-orientated approach adopted in teaching and learning. The institution actively practises a culture of participation ("inclusion"). This includes considering the needs and interests of students and teaching staff in different circumstances or with different social, physical or psychological conditions. All groups are encouraged to participate on a regular basis (level 3).**

(The next level to attain would be:)...support the organisation as a whole in acting in a predictive and proactive way, e.g. by identifying and eliminating all elements obstructing the principle of focusing on the student, learning outcomes and participation.

Recommendations

The peers very much appreciate the already started implementation of a business management approach. In their view it is a good method to establish and control relevant processes in a perspective on strategy and quality. Concerning its implementation, the peers would like to point out that successful projects depend on sufficient resources (especially *time* of faculty members contributing to these projects). In the peers' view, the implementation of a business management approach promises to have a profitable return on investment in terms of controllability of processes).

Evaluation Criterion I.2: (Quality-) management systems/governance

Evaluation questions

Institutional dimension: How is the (quality-) management of the institution organised in terms of organisational settings (responsibilities), structures, material and human resources? Who is involved, who is responsible, and who is informed? How is the relation between the key sections within the institution (teaching, research, administration) structured?

Procedural dimension: How does the institution implement its quality-related policy (processes)?

Cultural dimension: Which values and methods are characteristic for the organisational setting and structures as well as the implementation of quality assurance and development within the institution (can be identified in management approaches, types of organisation etc.)? How does the co-operation between all groups involved work?

Analysis and findings of the peers

FRI is organised in six chairs, covering together the whole subject of computer engineering and informatics. FRI's highest professional body is the FRI-Senate, deciding upon academic matters in the areas of research and development as well as education (amongst others adopting drafts for new study programmes). The Senate is backed up by a differentiated structure of committees responsible for defined tasks important to the overall operation of the faculty. An important specific body for quality management is the Committee for Monitoring of Quality and Self-Evaluation (CMQS). This committee performs an autonomous advisory function by monitoring the adequacy of the faculty's strategy and the respective quality-assurance as well as quality-improvement measures. It is elected from teaching staff and students. The operative (quality-)management of the faculty belongs to the dean supported by his vice-deans (for *Education, Research, Develop-*

ment and for *Economic Affairs*) and the secretary, which heads the administrative units of FRI. In financial decisions and reports, the FRI-management depends on an agreement with the FRI-Governing Board. The management is responsible for implementing FRI's quality-related policy. Presently, the general procedure consists of planning, self-evaluation, reporting and external evaluations/accreditations. In a perspective on future development, FRI has already begun to implement a business process management approach.

Concerning the representation of internal and external stakeholders' needs, FRI has recently detected a lack of strategic co-operation with strong industrial partners. On recommendation of the CMQS, the faculty plans to appoint a Strategic Council with members from industry in 2014, aiming at elaborating FRI's sensitivity concerning labour market needs. An additional option for the representation of employers' needs is the FRI-Alumni-Club, which is headed by a former alumnae and currently representative from a company cooperating with FRI. Students as internal stakeholders are in general represented in the FRI-Student Council and in committees relevant to their concerns. An exception to this was identified by the peers with regards to the representation of doctoral students. They complain about not having a feedback mechanism especially for their educational process. Because of their hybrid status as students and employees, their needs and interests are not yet represented in the governing structure of the faculty. In view of the peers, the needs of this specific group should find its representation in the organisational structure of FRI, because it is the main source for recruiting prospective scientific staff.

With regards to the **institutional setting**, the peers appreciate the established organisational structure – especially the function of the CMQS. Additionally, the FRI-staff in charge was perceived to be highly aware of strengths and weaknesses of the faculty's organisation. There appears to be movement in this structure¹ (not all bodies are yet defined by the FRI-Statutes of 2013, e.g. the FRI Curricular Committee). Despite of that, the peers did not recognize an unproductive overlap of responsibilities. They rather consider the structural changes as a demonstration of the ability to adapt the organisation to changes in the structure of tasks. In a **procedural perspective**, the peers recognize an effective application of the present methods. Nevertheless they very much appreciate FRI working on the implementation of a business process management approach, which is in their view an adequate tool for an even stronger alignment of processes towards objectives. In a **cultural perspective**, the discussions between peers and teaching staff revealed the annually pedagogical conference to have a great influence on the awareness of teaching staff concerning the quality of education. This conference aims at self-monitoring of the study programmes, an exchange of best practices in teaching and new educational approaches. Another value observed by the peers in this context is fair *competition*. FRI is keen to organise students' competitions in co-operation with companies in a national and international environment.

¹ The Curricular Committee, which is considered to be important for quality management concerning programme contents, was founded recently in 2012.

Levels of maturity observed

The peers perceived the **institutional setting** to be established and controlled. To achieve full maturity on the scale, the ability of proactively adapting a changing environment has to be proven.

The methods established in a **process perspective** connect to closed quality loops. Obviously FRI is further developing its approach. The peers strongly support the efforts of FRI to implement a business management approach.

Concerning the perception of the **organisation's culture**, the peers were impressed of the teacher's awareness concerning didactics. The peers perceive a culture of coherence, which ensures that information and constructive criticisms are shared. In this view, the organisational values support FRI's strategic direction.

→ The organisational setting, structures, material and human resources required for quality management...**have been established and are controlled. The tools, methods and procedures destined for the internal definition of quality-related expectations (objectives) and quality reviews are well-coordinated and appropriate for identifying any divergence from the objectives and taking measures with only little use of resources. The institution's quality management is part of the functions of its panels and management. The tools, methods and procedures destined for internal quality reviews are consequently orientated (among other things) to fulfil the institution's aims of good teaching and successful learning and, in terms of the programmes / courses / trainings on offer, focus on the student and on the learning outcomes. The higher education institution knows whether its objectives are met on the different levels. (level 3)**

(The next level to attain would be:)...are developed further in a predictive and proactive way. This implies that further development is not merely a reaction to deficits but an approach that looks ahead thanks to the analysis of expected or potential internal and external future developments. In terms of good teaching and successful learning, the higher education institution is in a position to identify its state of development and adapt its objectives.

→ Methods which lead to the intended outcomes in the institution's quality policy...**have been established and are controlled. The processes to implement the institution's quality-related objectives are guided by the cyclical logic of planning, implementation, analysis of success and deduction of measures. The general requirements for quality in teaching and learning are assessed on a regular basis using only efforts and resources which are reasonable on a sustained basis. Inefficiencies in quality management procedures are identified and eliminated (level 3).**

(The next level to attain would be:)...are developed further in a predictive and proactive way.

→ The predominant values and methods which guide most actions...**support the organisation as a whole in strategically directing the processes used to achieve the intended results. The higher education institution actively supports the involvement of students and teaching staff. The in-**

stitution is guided by the principle of openness, transparency and the protection of individuals involved, thus allowing them to participate and evaluate independently and without the risk of personal disadvantage. To increase synergies, the higher education institution supports internal, vertical networks and the exchange of experiences (level 3).

(The next level to attain would be:)...support the organisation as a whole in acting in a predictive and proactive way, e.g. by analysing which material and immaterial/cultural barriers obstruct the participation of students and teaching staff in quality management. The institution systematically supports the elimination of any such barrier. Its organisational approach has a deliberate effect on its quality management and is integrated in all further developments in an approach that looks ahead.

Recommendations

With regard to the doctoral students, the peers strongly recommend to ensure the representation of their needs and interests in the governmental structure of FRI. For the implementation, the specific status as employees should be considered to ensure that PhD-students can provide honest feedback without suspecting restraints in their employee-relation to the faculty.

Evaluation Criterion I.3: Monitoring/self-examination

Evaluation questions

Which strategies and methods does the institution have to review the (quality-related) objectives and the quality management system?

Analysis and findings of the peers

Every seven years, UL as a whole organization undergoes a process of external quality assurance by the Slovenian Quality Assurance Agency SQAA. An external accreditation is also mandatory at the level of study programmes. These cycles are defined by national standards. Additionally, FRI conducts voluntary external evaluations – like the present project this report is focused on.

A preliminary step in those external quality assurance processes is a self-evaluation. Monitoring and self-evaluation are conducted by the CMQS as annual processes leading to the *Business, Self-Evaluation and Accounting-Report*. This (published) report clearly shows the implementation status of proposed measures by CMQS. It also provides data on quality-related properties of study programmes and research performance, which result in an assessment of these fields and a proposal for improvements. It is guaranteed that students participate in the CMQS as well as in the FRI-Senate. The report is adopted by the FRI- and the UL-Senate.

In view of the peers, the alignment between objectives and data can be confirmed – the data presented is useful to identify a certain level in achieving the objectives. But the connection be-

tween data and objectives could even be made more explicit. Maybe this is an artifact of the “subsidiary” embedding of the faculty’s objectives into the more general objectives of UL. The peers would appreciate if the Annual Report for a specific year would be related more explicitly to the FRI objectives as presented in chapter I.1.

Levels of maturity observed

Overall, the peers are convinced that the processes to review and adapt the objectives of FRI are carried out on a regular basis. They enable to assess the achievements towards the FRI-objectives – although the link between (performance-)data and objectives could be stressed more explicitly. The overview of the presented data shows, that it is looking into the recent past. To achieve the next level of maturity, it would be necessary to further develop KPIs towards indicating future developments in a proactive/predictive way. As an example this would mean identifying potential PhD-students (in the masters’ programmes) before enrollment. This would provide early planning factors useful to adapt the organization to future developments.

→ The review and adaptation of objectives...are carried out on a regular basis (incl. structures, resources, processes). The institution is aware of the reasons for any divergence from the objectives and has solid data and information available to adapt the objectives where necessary. This affects neither the academic freedom of its members nor the participation in, nor the transparency of the organisation (level 3).

(The next level to attain would be:)...are carried out in a predictive and proactive way, i.e. expected or potential internal and external developments are systematically kept in consideration (incl. structures, resources, processes and the organisational approach).

Recommendations

For monitoring and self-examination, the annual report should show a closer relation to the quality and development objectives of the faculty as presented in chapter I.1 and the information used should enable a more proactive approach in planning and implementing what is internally considered good quality.

II. Educational Programmes / Courses / Trainings

Evaluation Criterion II.1: Creation and development of programmes / courses / trainings
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Evaluation questions

Institutional dimension: How is the creation and development of degree programmes organised in terms of organisational settings (responsibilities), structures, material and human resources?

Procedural dimension: What are the processes to create and further develop degree programmes? Who is involved, who is responsible, and who is informed? How does the institution incorporate relevant external (legal, social and professional) requirements?

Cultural dimension: Which values and methods are supported or are expected of the people involved in terms of the possibilities to participate? This applies above all to members of the higher education institution and relevant stakeholders. How are they informed? What about conflicts? To what extent are relevant stakeholders informed and prepared to participate? How does the co-operation between all groups involved work?

Analysis and findings of the peers

In general FRI reports following a conservative approach towards the development of new study programmes, consciously managing a few good programmes. In FRI's view this prevents from narrowing of subjects and eases the efforts for administration. In general, the faculty considers a good theoretical foundation of its study programmes as the basis for the development of new knowledge.

The mandatory external accreditation process ensures that programmes are developed on the basis of defined goals in terms of learning outcomes and that labour market needs are addressed by these goals. The relevant input for programme development comes from internal stakeholders, like the FRI Curricula Committee (for the first and second cycle programmes), the Committee for Research and Doctoral Studies (for third cycle programmes) and from the FRI Alumni Club. The Committee for Study Affairs is responsible for programme-related rules and regulations. The recently founded FRI Alumni Club is contributing to programme development by providing feedback based on the experiences of FRI-graduates. The FRI Curricula Committee/Committee for Research and Doctoral Studies discusses new ideas, ideas for changes in programme curricula and it also monitors the accordance of programmes to the recommendations of the professional societies (ACM, IEEE, AIS) – thereby keeping subjects on an international standard.

FRI reports to follow a high quality procedure of creation and implementation of study programmes. Programme development is a three staged decision making process, starting with the compilation of a proposal in the relevant commissions of FRI, leading to an adoption in the FRI-Senate (first stage). On the second stage, it has to be confirmed by the UL Senate. This implies an

evaluation by three independent evaluators and an adaptation of their recommendations, before the proposal is submitted to the SQAA. The whole process takes one to one and a half year.

On course level, there are also formal procedures for changes. The faculty distinguishes between minor and major changes. Minor changes for example address the implementation of productive student feedback derived from evaluation questionnaires. Those changes take place in responsibility of the appointed lecturer. Major changes are discussed in the FRI Curricular Committee and the Committee for Study Affairs and then have to be approved by the FRI-Senate. If changes affect other courses (e.g. courses providing prerequisites for later periods of study), the courses are pooled for the decision. In case of compulsory parts of the programme, changes even have to be approved by SQAA.

The **institutional setting** for programme development is seen as established and controlled. Obviously FRI favours a high level of division of labour in its committees, without provoking the impression that competences are not clearly defined. In general, the initiative for programme development can be placed by any academic stakeholder within the faculty. In general, the different academic stakeholders are represented in the commissions responsible for preparing and adopting proposals. An already mentioned exception to this found by the peers are PhD-students (already mentioned in chapter 1.2). The self-detected need for a strategic council was already mentioned in chapter 1.2. In a perspective on **procedures**, the feedback provided by the FRI Alumni-Club could be developed further on a more formal basis – e.g. an alumni survey conducted in the name of the FRI-Alumni-Club. This would ensure a lasting visibility of this feedback. In a **cultural perspective**, faculty staff in general shows a strong perception of industry's needs concerning the problem solving competences of FRI-Alumni. FRI addresses them by advertising voluntary real life student competitions (e.g. programming contests) in co-operation with companies.

Level of maturity observed

Concerning the institutional setting, the peers appreciate FRI's structure as established and controlled. They support the faculty's intention for further development by implementing a strategic council, incorporating the needs of industry.

Processes for programme and course development are considered to be implemented. A repeatedly closed quality cycle under inclusion of alumni and employers has to be proven yet.

In the peers view, the observed organisation's culture has a continuously visible effect positive effect on the intended outcomes.

→ The organisational setting, structures, material and human resources required for the creation and further development of programmes / courses / training offers...**have been established and are controlled. The (further) development of course offers is guided by the institution's quality-related objectives and its idea of good teaching and successful learning. All adaptations to the**

definition of quality and its objectives are also applied when course offers are developed further (level 3).

(The next level to attain would be:)...are aligned with and (where necessary) oriented to follow expected or potential internal and external future developments in a predictive and proactive way.

→ The processes to create and/or further develop programmes / courses / training offers...**have been implemented. The procedure rules and responsibilities for the creation and/or further development of course offers have been communicated and are known to the target group(s). Among other things, this leads to the harmonisation of the intended learning outcomes of each course on offer and the stipulated internal and external requirements. Internal and external (legal, social and professional) factors and stakeholders are systematically integrated in the processes (level 2).**

(The next level to attain would be:)...have been established and are controlled. Course offers are reviewed and developed further on a regular basis. All quality assurance results are integrated in the decision-making and management processes required to further develop course offers. There are regular assessments to check whether the programmes / courses / trainings offered by the higher education institution are in line with the institution's quality-related expectations as to good teaching and successful learning. It is also assessed whether the intended learning outcomes of the individual programmes / courses / trainings on offer are achieved. Quality assurance in programmes / courses / trainings on offer also provides the criteria to evaluate whether and to which extent the set objectives are viable and reasonable or have to be adapted.

→ The predominant values and methods which guide most actions...**have a continuously visible positive effect on the intended outcomes. There is a clear communication approach as to the possibilities and willingness to participate of the members of the higher education institution and relevant stakeholders, whom are continuously informed about their tasks and opportunities. As a general rule, the collaboration between the individual groups works well and would be described as positive by the participants. Any conflicts are moderated and resolved by the persons in charge on a regular basis. The institution guarantees that the intended learning outcomes of each course on offer are readily accessible to all relevant stakeholders, especially teaching staff and students, and are anchored in a way that allows all relevant stakeholders to refer to them (level2).**

(The next level to attain would be:)...support the organisation as a whole in strategically directing the processes used to achieve the intended results. There are strategic possibilities for members of the higher education institution and relevant stakeholders to participate which are used accordingly. The higher education institution successfully combines the different interests of its members in the creation and further development of course offers and aligns them with the development strategy of the overall organisation. The participation of teaching staff and students in the creation and further development of course offers is supported. The higher education institution supports the regular participation of all relevant administrative and academic units in implementing

its procedures to assure and improve the quality of course offered. It also ensures that the information required is readily accessible.

Recommendations

The integration of doctoral students into the relevant committees was already recommended in chapter I.2.

In view of the peers, the feedback provided by the FRI Alumni Club should be developed further in a way that ensures lasting visibility. FRI already stresses the priority to monitor the acquired knowledge and competences of graduates in its Annual Report 2013 (chapter 3.6.2). One possible option is the implementation of an alumni-survey which is supported by the FRI Alumni Club.

Evaluation Criterion II.2: Implementation of programmes / courses / trainings on offer

Evaluation questions

Institutional dimension: Which structures as well as material and human resources exist to implement the programmes / courses / trainings on offer?

Procedural dimension: What are the procedures when implementing the programmes / courses / trainings on offer? Who is involved, who is responsible, who is informed at what point?

Cultural dimension: What are the principles for allowing members of the higher education institution and relevant stakeholders to participate in implementing the programmes / courses / trainings on offer (organisation)? How do they translate? To what extent are relevant stakeholders informed and prepared to participate? Are the set rules and guidelines accepted by those affected by them? How are conflicts handled? How does the co-operation between all groups involved work?

Analysis and findings of the peers

FRI presently offers five undergraduate, four graduate and one doctoral programmes. The faculty's habilitated staff is engaged in those study programmes. The programmes are coordinated by a distinguished structure of committees functioning as working bodies of the FRI-Senate. The most important committees for the programmes offered solely by FRI are the already mentioned FRI Curricular Committee, the FRI Committee for Study Affairs and in case of third cycle education the FRI Committee for Research and Doctoral Studies. Interdisciplinary programmes conducted with other UL-Faculties are implemented in responsibility of shared councils or working groups. In 2011 FRI introduced the function of programme coordinators for each study programme. Usually coordinators are teachers within the programme, who are assigned by the dean and approved by the FRI Senate. They function as a link between teaching staff and students. The coordinators of the largest programmes are also members of the committees responsible for the implementation

of programmes. Information about programme- and course-implementation for internal stakeholders is presented in a study information system, which allows administrative support in managing student data and grades.

The number of enrollment places for the first cycle programmes is annually proposed by the Committee for Study Affairs, authorized by the FRI Senate and sent to the government for approval and inclusion in the national call for enrollment. For second and third cycle students, the committee directly confirms the accepted students. Students in the first cycle are selected at national level on basis of interests and secondary school performance. The enrollment is prepared by an advertisement campaign on the FRI- and UL-websites, in social media and in printed publications - with the programme coordinators in charge for keeping this information up to date. In general, for every study programme there is an information package available in English. In some programmes (like *Computer Science*), the number of requests exceeds the number of enrollment places – making student selection possible to a certain extent. There is a special political situation leading many Slovene graduates from secondary schools to enroll in higher education without really studying. This results in high drop-out rates. FRI analyses this situation and is able to identify and react on the subset of non-active students.

Students in Slovenia are studying in a class system. This means that the coherence of an enrolled cohort is kept as long as the respective students can fulfill their obligations towards progression to the next semester. If just minor obligations are missing, students can attend courses from the next semester. But in principle, there is the possibility of repeating whole years. The peers in general do not appreciate the class system because of expected inflexibilities towards individual students' progress. But they take into account the role of the class as a reference point for student representation. All in all, they consider it as mandatory system, which needs an "as-flexible-as-possible" handling.

With regards to the **institutional setting** for programme implementation, the peers appreciate the established structure of FRI, especially the role of the course coordinators and the important coordinative function of the FRI Curricular Committee in informing teaching staff about unintended overlaps in subjects and iteratively adjusting student workload based on feedback by the classes. FRI collects feedback on students' workload either by course coordinators (*informal procedure*) as well as by course based student surveys (*formal procedure*). In a perspective on **procedures**, in the peers view, FRI's approach to implement quality-related objectives at programme level becomes visible at the following activities: FRI conducts internal calls for course proposals of the latest research related and technical topics in education. Concerning the objectives summarized as an "internationalisation of education" the faculty has begun to expand electives taught in English and additional offers like international student competitions. Though the number of electives in the first cycle is low yet, the direction of implementation is clearly visible. In the second cycle, FRI conducts masters' programmes together with international universities. The third cycle programme is taught completely in English. A drawback in perspective on a mature quality management is the visibility of processes. They are yet described in written form – complicating their easy comprehensibility. The display could come through much clearer, because this is the prereq-

uisite for having processes established and controlled. In a **cultural perspective**, the peers acknowledge FRI promoting an informal collaboration with fine arts students (to prevent tunnel thinking and to enhance soft skills in communication with non-computer-scientists). FRI further reports a cultural shift from administration to service provision in the administrative units supporting the study programmes. According to FRI, this shift needs some further support.

Level of maturity observed

Concerning the maturity level, the peers come to the conclusion that the organisational setting, structures, material and human resources required for the programmes / courses / training offers are established and controlled. An extension of didactical methods (e.g. the integration of life classroom or external MOOCs) could be a way leading to the next level.

They consider the processes for the implementation of programmes to be implemented. But at present, processes are yet described in written form. FRI already challenges mapping processes in a project in responsibility of the Vice-Dean for Economic Affairs. In view of the peers, achieving adequate results in this project would be a suitable way to achieve the next level of maturity (having processes established and controlled).

In perspective on the organisation's culture, the peers recognize visible positive effects in some areas produced by the predominant values guiding most actions. The implementation of a business management approach would be the right vehicle to foster the requested service attitude and hereby achieving a continuously positive effect.

→ The organisational setting, structures, material and human resources required to implement programmes / courses / training offers **...have been established and are controlled. (level 3)**

(The next level to attain would be:)...are developed further in a predictive and proactive way. The competent units are in a position to anticipate, avert or eliminate problems and elements obstructing the organisation of programmes / courses / trainings without delay.

→ Processes used to achieve the intended results when implementing programmes / courses / trainings...**have been implemented. The processes required for the organisation of the programmes / courses / trainings are efficient and are used by the units in question on their own authority. They also allow for a vertical co-operation between units and panels, e.g. between the administration and academic units. The people and units involved are aware of their responsibilities. (level 2)**

(The next level to attain would be:)...have been established and are controlled. The tools, methods and procedures employed also provide information from which the institution gains detailed insight into the quality (strengths and weaknesses) of the course organisation. There is a working

participation of teaching staff and students in the creation and further development of course offers.

→ The predominant values and methods which guide most actions...**have a positive effect on the intended outcomes that becomes evident in some areas. There is a definition of which members of the higher education institution, stakeholders or units should cooperate and in what way in order for the course organisation to run smoothly. (level 1)**

(The next level to attain would be:)...have a continuously visible positive effect on the intended outcomes. It has been communicated which members of the higher education institution, stakeholders or units should co-operate and in what way in order for the course organisation to run smoothly. There is a working co-operation between key units and panels which keeps the course organisation in line with the institution's quality-orientated approach. All parties involved at the higher education institution apply and fulfill the rules and requirements they are affected by. The higher education institution supports the collaboration and mutual assistance of the different people and units involved.

Recommendations

The peers support FRI in the implementation of a business management approach. The approach is in their view adequate for further establishing and controlling support processes for the conduction of study programmes and to facilitate a change in attitudes towards more service orientation of supporting units for the core “businesses” in research, teaching and learning within the faculty.

Evaluation Criterion II.3: Co-operations

Evaluation questions

Institutional dimension: How are co-operations organised to implement the programmes / courses / trainings on offer (structures and rules)?

Procedural dimension: What procedures are there to structure co-operations and implement them? Who is involved, who is responsible, and who is informed?

Cultural dimension: What are the principles that guide the institution when it comes to internal and external co-operations to structure and implement the programmes / courses / trainings on offer? How do the members of the higher education institution and relevant stakeholders participate? Are the set rules and guidelines accepted by those affected by them? How are conflicts handled?

Analysis and findings of the peers

The criteria with regards to co-operations refer to several dimensions: First, it refers to internal co-operations with other UL-faculties in shared interdisciplinary study programmes. FRI conducts two interdisciplinary programmes in the first cycle, two programmes in the second cycle and two in the third. Those programmes are implemented in responsibility of shared committees/working groups. With FRI reporting the intention to revise a special interdisciplinary programme not meeting the standards, the peers perceive this shared responsibility to be effective.

Secondly, the criteria refer to external co-operations with industry and professional bodies in research projects and educational provisions. From the discussion with faculty management, teaching staff and students the peers got the impression that FRI's management emphasises the importance of industry contacts. Besides from co-operation in research this becomes visible at e.g. the invitation of industry partners to a dedicated series of seminars, programming challenges and other competitions with Slovene and international companies and professional bodies. In view of the peers, in a **cultural perspective** this exchange leads to a high awareness of staff with regards to problem solving competences needed by the industry. The self-detected need for a strategic council has already been mentioned in chapter I.1.

Thirdly, FRI stresses the importance of internationalization in education as a strategic objective. In view of the peers it becomes visible that FRI is working on the prerequisites for the international mobility of academic staff and students. With regards to the **institutional setting**, FRI tries to expand the number of co-operation agreements with compatible institutions abroad and in a **procedural perspective** reports only to prolong agreements if the exchange meets FRI's requirements concerning motivation and adequate prior knowledge of incoming students. In the second cycle, FRI conducts a double degree programme with integrated student mobility. To backup mobility, FRI for itself does not employ an administrative function like an international office, but international mobility is supported by the UL International Office. For subject-specific guidance FRI distributes the responsibility for supporting individual student's mobility to exchange coordinators amongst the faculty's teaching staff.

Furthermore FRI has begun to expand the number of elective courses taught in English. An obstacle towards this issue is that by Slovene regulation, English as a language of provision in compulsory courses of the first and second cycle programmes have to be conducted supplementary to the same courses held in Slovene. In view of the peers, the implementation and further direction is clearly visible – although there is room for improvement yet. As a mid-term objective, FRI reports to establish an English track in the second cycle programme "Computer and Information Science". The peers appreciate this important progress, but they would like to encourage FRI to keep strengthening English in the first cycle as well, because the number of courses taught in English is still low. In the peers' view, international mobility should be enhanced from the first cycle on – to enrich the academic and professional experience of students and to keep their motivation on a high level.

Level of maturity observed

Overall the organizational setting and the procedures for co-operations appear to be implemented on a solid basis. Although the peers admit that the implementation of measures aiming at a stronger international profile of the study programmes is much easier in the second and third cycle, they would like to stress that students should be introduced to this habit of the academic culture from the beginning of their studies onwards. In a cultural perspective, this would be needed for a stronger strategic utilization of international co-operations.

→ The organisational setting, structures, material and human resources required for co-operations...**have been implemented, i.e. internal and external co-operations for course offers are used. External co-operations have been arranged and stand on a solid basis. Internal co-operations are guided by strictly defined rules and standards and do not depend on individuals. (level 2)**

(The next level to attain would be:)...have been established and are controlled. As a general rule when implementing programmes / courses / trainings, internal and external co-operations are used in line with the institution's definition of quality, its quality-related objectives and the intended learning outcomes.

→ Processes used to achieve the intended results in internal and external co-operations for course offers...**have been implemented. Co-operations are carried out to implement programme / course / training offers and develop them further. The respective responsibilities are met and the rules and standards for internal and external co-operations are applied by all parties involved. (level 2)**

(The next level to attain would be:)...have been established and are controlled. The co-operations are assessed and, where necessary, adapted to programme / course / training course offers and develop them further.

→ The predominant values and methods which guide most actions with respect to internal and external co-operations for course offers ...**have a continuously visible positive effect on the intended outcomes. (level 2)**

(The next level to attain would be:)...support the organisation as a whole in strategically directing the processes used to achieve the intended results. The higher education institution is guided by the principle of openness which favours the communication and co-operation between students and teaching staff within the institution and with external partners. It ensures that all its members are aware of the standards for co-operations which the institution has defined for itself.

Recommendations

The peers appreciate the measures taken by FRI for strengthening its international network and co-operations. They consider the faculty to be on the right way, but they recommend also

strengthening the international orientation of FRI's first cycle programmes. In the peers view, the enrichment of the academic and professional experience of students by academic mobility should be enabled and supported from the first cycle onwards – thus introducing students to on the typical academic exchange of views and findings beyond borders.

Evaluation Criterion II.4: Examination systems and organisation of exams

Evaluation questions

Institutional dimension: What are the principles, rules and structural provisions that guide the methodology and form of exams? How are exams held and what are the rules in terms of setup/responsibilities, structures, material and human resources?

Procedural dimension: What are the processes used to choose the methodology and form of exams (including evaluation criteria)? What are the processes in organising exams? Who is involved, who is responsible, who is informed at what point?

Cultural dimension: Which values and methods are supported or expected of the people involved when structuring and organising exams? How can the relevant stakeholders get involved in structuring and organising exams? How are they informed about it? How does the co-operation between all groups involved work? Are the set rules and guidelines accepted by those affected by them? How are conflicts handled?

Analysis and findings of the peers

Examination in the first and second cycle is defined in general by the FRI Study Rules and Regulations (in responsibility of the FRI Committee for Study Affairs) and for the third cycle by the FRI Regulations of the Doctoral Study (in responsibility of the FRI Committee for Research and Doctoral Studies). Final theses are subject to special regulations, guidelines for students and instructions for teaching staff responsible for grading. The type of exam for specific courses is specified in the course description, which was subject to the accreditation of the study programmes by SQAA. FRI reports to promote a variety of examination forms and methods. The types of assessment consist of homework, projects, presentations, seminars, tutorials, tests as well as oral and written exams. According to FRI, the overall focus lies on project work. Information about these types of exams is spread in the pedagogical conference, where teaching staff has the possibility to exchange new ideas and innovative educational approaches.

The organisation of exams proceeds as follows: There are three examination periods throughout the academic year, providing each course with three examination dates. The examination schedule is generated in a way that prevents overlaps and enables a fair distribution of exams. This schedule is approved by the FRI Student Council. Students have to register for exams to assure that the rules for possible retakings are complied with. The maximum number of six possible re-

takings is (from a German point of view) quite high – German students usually have three options. The peers consider this to dependent on a UL-policy, but would like to point out that in their view, reducing the possible options for retaking exams is likely to cause a disciplinary effect on the study behaviour. After the exam, there is a fixed term of one week for the assessment of written exams, which is (according to the faculty) thoroughly observed by students. To match these requirements, teaching staff gets some support for assessment and grading.

Concerning one specific exam in the PhD-programme, the peers detected that views differ from each other: The responsible staff reasons that this specific exam at the beginning of PhD-studies is needed for selection of students, because there are no other options available (e.g. specific admission criteria). PhD students consider this exam to be badly implemented, covering the whole subjects from the first and the second cycle with only three possible retakings. The peers suspect the causes for these differing views in the already mentioned lack of integration of PhD-students into the governing system of FRI (I.2). They expect an integration of PhD-students into the relevant commissions to foster a shared understanding.

Level of maturity observed

The audit team considers the **institutional setting** required for the methodology, form and organisation of exams to be implemented. The corresponding rules, guidelines and instructions are clearly defined and specifically formulated for the main stakeholders in terms of standards, responsibilities and processes. The organisation of exams is considered to be implemented well in terms of **processes**, achieving an adequate planning reliability for students. In a **cultural perspective**, the peers especially appreciate the function of the annual pedagogical conference, which in their view creates a continuously visible effect on the intended outcomes. What is necessary to label the maturity level as “established and controlled” is a more explicit link between the defined learning outcomes of courses and the respective examination methods applied. The peers did not find information on this issue in the annual reports or the SER. They presume that there is a feedback loop going on (maybe on the pedagogical conference), but at present it is not yet visible if the adequacy of examination methods with regards to the defined learning outcomes of courses is monitored.

→ The organisational setting, structures, material and human resources required for the a) methodology and form and b) organisation of exams...**have been implemented. The units/persons in charge at the higher education institution are aware of their responsibilities as well as of the applicable rules and standards and fulfil them according to a) and b). The criteria for evaluation have been communicated (a). The organisation of exams is generally well-coordinated and takes into consideration all aspects of academic feasibility (b). The people and units involved in organising exams have been in-formed about their responsibilities and functions and fulfil them (b). Registration and de-registration for exams is equal for all students (b). (level 2)**

(The next level to attain would be:)...have been established and are controlled. As a general rule, the methods and forms of assessment used serve to determine whether and to what extent the intended learning outcomes are achieved (a). The higher education institution has internal quality-related rules and standards for the methods and forms of assessment which take into consideration the principle of focusing on the learning outcomes. They are in line with the institution's idea of good teaching and successful learning (a). The organisation of exams allows for the student progress in individual programmes / courses / trainings on offer to be effectively monitored. It also allows for individual types of student progression and takes into consideration different student needs, dispositions and circumstances (b).

→ Processes used to achieve the intended results in the a) methodology and form and b) organisation of exams...**have been implemented. The definition and communication of the methods and forms of assessment as well as performance-related expectations are guided by previously established processes (a). This way, all parties involved and especially the students are informed on time (a). The exam organisation processes also make sure that all parties involved and especially the students are informed on time (b). All assessments are coordinated in a way to grant the students enough preparation time (b). The results are available without great delay and do not stand in the way of student progression (b). (level 2)**

(The next level to attain would be:)...have been established and are controlled. The tools, methods and procedures employed also provide detailed information on the quality (strengths and weaknesses) of a) the methods and forms of assessment used and b) the organisation of exams. Based on this information, the institution plans how to continue developing its quality-related objectives.

→ The predominant values and methods which guide most actions...**have a continuously visible positive effect on the intended outcomes. The students are assessed on the basis of published criteria, rules and procedures that are applied in a consistent way (a, b). The members of the higher education institution agree with the principles of holding transparent, comprehensible and methodically orientated exams (a, b). Cheating and giving or accepting any kind of personal advantage on either side is prevented (a, b). At least on the level of individual course offers, the units, persons or panels in charge align the planning, implementation and post-processing of exams (a, b). (level 2)**

(The next level to attain would be:)...support the organisation as a whole in strategically directing the processes used to achieve the intended results. In order to do so, when structuring the exams and evaluation criteria the higher education institution promotes a focus on the student and on the learning outcomes (a). It also supports teaching staff skills in using different examination forms and methods as well as innovative assessment approaches and the internal exchange of experiences (a). The units/persons in charge support the co-operation and the internal alignment of a) the structuring of exams and b) the organisation of exams on a horizontal level, i.e. within the relevant academic units and between the academic units and the administration. The participation of teaching staff and students is supported with a view to continuously optimising a) the

structuring of exams and b) the organisation of exams in all programmes / courses / trainings on offer.

Recommendations

In its Annual Report 2013 (chapter 3.6.2) FRI stresses the need to statistically monitor the acquired knowledge and competences of graduates. Without discouraging an already proposed alumni survey (chapter II.1), the implementation of a quality loop testing the adequacy of examination methods content wise and with regard to methodology rather than in mere figures would facilitate confidence in the alignment between defined and achieved learning outcomes of students. This can be used for the implementation of a contemporary monitoring of the educational impact.

Evaluation Criterion II.5: Recognition of achievements

Evaluation questions

Institutional dimension: What are the rules, structures and responsibilities for the recognition of achievements obtained from other higher education institutions or in a non-academic setting?

Procedural dimension: What procedures have been defined for the recognition of achievements obtained from other higher education institutions or in a non-academic setting? Who is involved, who is responsible, and who is informed?

Cultural dimension: Which values and methods are supported or expected of the people involved when structuring and organising exams? How can the relevant stakeholders get involved in structuring and organising exams? How are they informed about it? How does the co-operation between all groups involved work? Are the set rules and guidelines accepted by those affected by them? How are conflicts handled?

Analysis and findings of the peers

Within FRI, the decision about the recognition of exams lies within responsibility of the FRI Committee for Study Affairs. FRI reports to have a defined process, implemented in accordance to the Lisbon Recognition Convention, which is visible to every stakeholder on the FRI website. For the preparation of recognition before the exchange, FRI uses learning agreements. If complaints arise concerning recognition decisions, they are handled by the FRI Committee for First and Second Cycle Applications. The discussion with staff from the commissions in charge reveals that there are margins for the comparison of achievements to be recognized within the FRI curricula. If these margins are overstretched, students are obliged to do e.g. some extra homework to get courses recognized. FRI also reports to recognize informal learning (with the exception of programming

skills) in the first and second cycle programmes to an extent of 6 credits. Additionally, FRI conducts double degree agreements, where recognition is merely an automatism.

The peers find the self-description of recognition processes by FRI approved in the feedback from students expressed in the discussions with them. Although not all students orient themselves towards international student exchange, the ones who did report of smooth processes, a good organization and an effective recognition of courses.

Level of maturity observed

The peers appreciate the institutional setting as well as the processes for the recognition of achievements and the handling of respective complaints as established and controlled. In their view, the underlying values support the strategic importance of international mobility. For further enhancement of recognition, the peers recommend FRI to extend the quality of international co-operations (even in the first cycle) to a level, which makes the recognition of external achievements dispensable.

→ The organisational setting, structures, material and human resources required for the recognition of external achievements...**have been established and are controlled. The rules, structures and responsibilities for the recognition of achievements obtained from other higher education institutions or in a non-academic setting are integral parts of the institution's quality strategy or quality management. Divergences are consistently identified and steps to eliminate them are taken. The recognition focuses on learning outcomes and allows for differences in content provided that the outcomes achieved are equivalent (level 3).**

→ (The next level to attain would be:)...are developed further in a predictive and proactive way. The units in charge of formulating and developing the institution's rules include its objectives regarding co-operations as well as national and international networks and the opportunities which the institution would like to offer its incoming students as well as its graduates/alumni (development perspectives).

→ Processes used to achieve the intended results in recognising external achievements...**have been established and are controlled. The procedures are efficient and produce results without great delay, allowing the students to organise their further studies without losing time (level 3).**

(The next level to attain would be:)...are developed further in a predictive and proactive way. The higher education institution has established processes to systematically identify future challenges and gradually adapt in connection with its networking and internationalisation strategy.

→ The predominant values and methods which guide most actions in recognising external achievements...**support the organisation as a whole in strategically directing the processes used to achieve the intended results. The higher education ensures that decisions regarding the**

recognition of achievements are made without any conflict of interests whatsoever. It promotes the recognition of achievements with a focus on the learning outcomes (level 3).

(The next level to attain would be:)...support the organisation as a whole in acting in a predictive and proactive way. To this end, among its members the higher education promotes an open attitude towards student mobility, e.g. by looking for solutions to make the recognition of external achievements easier (e.g. by means of co-operations).

Recommendations

In the peers view, recognition structures, procedures and the underlying culture of FRI are already convincingly elaborated. Further top-level improvement would require steady co-operations also for first cycle education to an extent, which makes recognition procedures dispensable (because recognition is merely an automatism).

Evaluation Criterion II.6: Assistance and advice

Evaluation questions

Institutional dimension: How does the institution offer and provide assistance and support for the students? What are the guiding principles? Which material and human resources are available?

Procedural dimension: What are the designated processes to structure the content of assistance and support? Who is in-volved, who is responsible, and who is informed? What are the processes of actually providing assistance and support? Who is involved, who is responsible, and who is informed? How are the involved parties and the target groups for assistance and support informed?

Cultural dimension: What are the guiding principles for assistance and support at the institution? Are the offers available used? If not, why not? How satisfied are the individual target groups with the assistance and support on offer? How does the co-operation between all groups involved work?

Analysis and findings of the peers

In general, FRI has a slim administrative structure with less than one fifth of the total staff working in administrative fields. The FRI Student Affairs offers information for students and continuous support for students' needs which is awarded frequently by Student Councils of UL and FRI. FRI also offers IT support both directly for students as well as for FRI's educational approach, which is reported to rely vastly on media supported education methods. With the objective to acquire more international students, FRI communicates the need to establish an international office (Annual Report 2013, chapter 3.1.9). Besides from this administrative support, FRI tries to ensure the environmental conditions for teaching and learning by offering extracurricular activities to their

students. Career- and employment-counseling is offered by the Career Centre of the UL and a career advisor shared by the technical faculties of the UL.

With the intention to provide guidance for students and to prevent high drop-out rates the faculty is conducting a tutorship system. At present, this system relies on senior-students assisting junior students. FRI itself stresses the future need to work on the passive attitude of students not using assistance and support offers to the possible extent. With a specification of the objectives to enhance the transition from the first to the second year, FRI reports the intention to strengthen the tutoring system by engaging teacher-tutors, who advice and encourage students and monitor their progress. The peers strongly support this intention, because they see the benefit of influencing students in a cultural perspective as early as possible.

Level of maturity observed

In perception of the peers, FRI is already at a high level concerning the organizational setting and procedures for assistance and advice. In view of the peers it has also derived the right measures to tackle self detected deficiencies in a cultural perspective. To achieve the next level of maturity, FRI should work on a culture where offers in support and advice are brought to the maximum of possible impact.

→ The organisational setting, structures, material and human resources required to provide assistance and advice to students...**have been established and are controlled. A consultation concept made to fit the needs of different student groups has been implemented all throughout the institution. The measures and tools required for evaluating and, where necessary, guaranteeing the effectiveness of differentiated consultation concepts for different student groups and potential students are available (level 3).**

(The next level to attain would be:)...are developed further in a predictive and proactive way, i.e. taking into consideration expected or potential future developments within the institution but predominantly with respect to the students and their needs.

→ Processes used to achieve the intended results in providing assistance and advice to students...**have been established and are controlled. The procedures, decision-making processes and information channels required to communicate and implement the concept of assistance and advice are efficient and have the desired effects. Among other things, they include the needs of different student groups. Information and data obtained from quality assurance (e.g. the target group's satisfaction with the offer, effectiveness) are used to improve the existing assistance and advice services. The required decision-making processes and information channels are already in use (level 3).**

(The next level to attain would be:)...are developed further in a predictive and proactive way, i.e. the processes in use also provide those responsible with the information required to identify any

expected or potential future developments within the institution but predominantly with respect to future students and their needs.

→ The predominant values and methods which guide most actions in providing assistance and advice to students...**have a continuously visible positive effect on the intended outcomes. The higher education institution or the units/persons in charge ensure that all information, assistance and advice services are well-known and easily accessible and that they do not depend solely on individual motivation (level 2).**

(The next level to attain would be:)...support the organisation as a whole in strategically directing the processes used to achieve the intended results. Among other things, the institution supports the advisory skills of the units/persons in charge according to its concept of assistance and advice. It also promotes an approach of providing assistance and advice which focuses on the student and takes into consideration the different needs and interests of different student groups.

Recommendations

The peers observe an elevated maturity level of FRI concerning its measures for support and advice of students. The peers support the intention to engage teaching staff as early as possible in the tutorship system, because this confronts students with positive role models and thus helps to influence their attitude in a cultural perspective, fostering their demand for support and advice.

Evaluation Criterion II.7: Monitoring/self-examination also relevant to chapter I.3

Evaluation questions

Who monitors how and at what point whether internal rules and procedures for documentation are complied with and whether they are efficient and have the desired effects? What happens to the results of such monitoring (procedure, when, who)?

Analysis of the peers

In general, compliance with internal rules and procedures is monitored by the commissions in charge and reported to the FRI senate. Furthermore the peers recognize the faculty to conduct established and controlled monitoring and self-examination procedures leading to dedicated enhancement-activities. A certain load of this monitoring seems to lie on the programme coordinators, who perform regular monitoring meetings with the classes and then communicate their findings to the FRI Curricular Committee and the Committee for Study Affairs, who cooperate with the CMQS in the compilation of the annual report. The peers consider this chain of communication to be more flexible and broad-leveled than a solely reliance on KPIs. Nevertheless, FRI reports to

recognize and challenge the need to monitor knowledge and competences achieved by graduates in a statistical sense (II.1).

But in perspective of monitoring and self examination the peers recognize some drawbacks, which are related to the integration of students: Students seem to be not very happy with the present (recently renewed) course-survey. They report questions to be partly pointless or not specific enough and the participation rate rather too low to provide a feedback which is useful to promote students' quality expectations and perceptions. The peers suspect this to be a not-intended effect of a yet unbalanced subsidiarity in the overall quality management approach of UL. Furthermore, members of the FRI Student Council complain about not getting the survey results on a regular basis – just in case of habilitation procedures. Students report that the FRI Dean communicates the handling of survey results and they admit that there is a positive change in the communicative culture within FRI, but the students suspect that it is not the whole picture. Therefore, members of the Students Council report about applying their own monitoring methods (e.g. consultation with classes) in parallel to the conduction of the survey – in view of the peers' doubling the effort.

Level of maturity observed

The peers in principle consider the monitoring and self examination procedures to be established and controlled. Nevertheless, the deficiencies pointed at by the peers have to be solved to keep this level.

→ Review and adaptation, developing programmes / courses / trainings further and implementing them, co-operations, examination systems, organisation of exams, recognition of achievements, student assistance and advice: these elements...**are used on a regular basis. The higher education institution is in a position to identify on all levels whether the objectives for teaching and learning are met. The institution is aware of the reasons for any divergence from the objectives and has solid data and information available to adopt the necessary measures and adapt the objectives where necessary. This affects neither the academic freedom of its members nor the participation and transparency of the organisation. There is a significant level of participation in self-evaluation processes, especially among teaching staff and students. (level 3)**

(The next level to attain would be:)...are predictive and proactive. Adaptations in the institution's document management approach are made on the basis of expected or potential internal and external requirements in an approach that looks ahead.

Recommendations

The peers' strongly recommend FRI to establish a consensus with students about monitoring procedures. Because monitoring of quality relies on the individual willingness to provide honest

feedback, the peers consider the active participation of students in the long run as a prerequisite of effective and efficient procedures.

III. Management of resources

Evaluation Criterion III.1: Material and human resources

Evaluation questions

Institutional dimension: What are the principles, rules, organisational settings (responsibilities) and structures that have been established for the management of material and human resources within the institution, especially in teaching and learning?

Procedural dimension: What are the management processes when it comes to material and human resources within the institution, especially in teaching and learning? Who is involved, who is responsible, and who is in-formed? How does the institution integrate external (legal and economic) requirements?

Cultural dimension: How can the members of the higher education institution and relevant stakeholders get involved in managing material and human resources for teaching and learning? What information is available on the management of material and financial resources? How is it distributed? Which values and methods are supported or expected of the people involved in terms of the use of resources? What are the guiding principles at the institution to avoid misuse or waste of resources? Are the set rules and guidelines accepted by those affected by them? How are conflicts handled?

Analysis of the peers

The FRI management describes the budget coming partly from the Slovene government and partly from the research and market activities of FRI to be quite stable. Most of the money is spent for salaries and fixed expenses (e.g. running costs for facilities). Financial incentives are considered to be limited² and investments (for e.g. the renewal of equipment) have to be planned early in advance. In general, the peers perceive financial flexibility to be restricted.

The distribution of financial resources and the responsibility for legal and financial regularity belongs to the FRI Dean and his Vice-Deans. The budget is spent according to an annual working plan and an accompanying financial and business plan. This plan has to be adopted by the FRI Governing Board, which consists of five members of teaching staff elected by the FRI Academic Assembly. With limited participation of stakeholders in financial aspects, the peers consider it as beneficial in a cultural perspective that the minutes of the Governing Board are made available to faculty staff.

The institutional setting responsible for the management of human resources consists of the FRI Dean and his Vice-Deans in combination with the FRI Committee for Human Resources (responsible for the mentioned habilitation process) and the administrative service by the FRI Human Resources and General Affairs. The amount of staff per faculty is reported to be fixed with little op-

² Faculty staff can enhance wages by attracting industry projects.

opportunities for growing faculties. With regards to the acquisition of staff, FRI is looking for more staff from an international environment – relying on open, non-subject-specific calls to this target area. This is in fact not considered to be very effective (by FRI itself) because of uncompetitive salaries in Slovenia, but the faculty is lacking effective alternative instruments due to financial restrictions. Nevertheless the faculty plans to appoint one professor from abroad. A chance is seen in long term co-operation contracts with high level researchers from abroad. Mostly, FRI relies on internal recruitment from its own programmes. Because of most FRI programmes having a professional focus, FRI is primarily recruiting from the interdisciplinary programme Computer Science and Mathematics, which has a sufficient theoretical focus for an academic career in computer sciences and informatics. Lecturers for the professional programmes are also acquired by open calls aiming at proficiency in the respective field and teaching experience. For new employees, FRI provides an information package.

There is a habilitation system in place to assure that the appointment to titles is justified by performance in research and education. Every teacher has to obtain habilitation. The ascending stages of the academic career are *Assistant Professorship*, *Associate Professorship* and *Full Professorship*. In the habilitation process leading towards these stages, the academic performance has to be cyclically proved towards the habilitation criteria (mostly impact of publications and student feedback). At both stages of Assistant Professors and Associate Professors this happens every five years. After ten years as an Associate Professor, a teacher can be appointed as a Full Professor – the only permanent position in this system. Decisions about habilitation in the first two stages belong to the FRI Senate and in case of full professors to the UL Senate. Students have a right to veto on these decisions. The habilitation system is not necessarily connected to academic positions – which means e.g. that some professors are working on the position of assistants.

Concerning material resources, FRI is moving into a newly constructed building, which was visited by the audit team. This enhances the presently constricted room situation and enables FRI to arrange its facilities supporting the educational approach. Some future uses of the new building aroused special attention of the peers. Particularly this is a workshop for top-notch student projects FRI is projecting for an exposed spot within the building. Students can apply for a workplace in this visible setting, thus achieving an exposed position implying the appreciation of the faculty. In a cultural perspective, the peers consider this as an effective method to enhance student competition.

Overall, the regulatory framework of the Slovene HE system seems to be quite inflexible to the peers. They consider FRI presently making the most out of its range of possible decisions.

Level of maturity observed

The peers perceive the institutional setting for the acquisition and distribution of resources to be established and controlled. What prevents the peers from considering the next maturity level is the perceived inflexibility in the HE system (especially with regards to human resources).

In a procedural perspective, the peers perceive relevant processes to be implemented. With the systemic inflexibilities given, they doubt that there is significant progress possible.

In a cultural perspective, the peers appreciate FRI plans for the use of the new facilities in alignment with its educational approach. With perspective on the information about financial decisions (adopted by the FRI Governing Board), it is at the moment not visible to what extent students are informed when it comes to decisions directly affecting their interest (appointment of teaching staff from abroad). This prevents the peers from labeling the achieved level as supporting the *organisation as a whole in strategically directing the processes used to achieve the intended results*.

→ The organisational setting, structures, material and human resources...**have been established and are controlled. The higher education institution has a good overview and control of its staff resources destined for teaching and learning as well as of their availability in the short and long run. It has significant influence on how the teaching staff fit to the programmes / courses / trainings offered (both in terms of the subject taught and teaching skills). It has sufficient funds and human resources in all sectors to implement its objectives for teaching and learning at least in the medium term (approx. 8 years). Potential risks have been identified, evaluated and documented. The distribution and safeguarding of both material and human resources is in line with the development aims of the institution. The composition and training of the staff teams, especially among teaching staff, guarantee that the learning outcomes can be reached (level 3).**

(The next level to attain would be:)...are developed further in a predictive and proactive way. In order to do so, the institution must be able to decide independently in matters of choosing/employing, organising and administrating its resources. The institution has a strategy to safeguard its material basis in the long run.

→ Processes used to achieve the intended results in managing material and human resources...**have been implemented, i.e. the responsibilities, possibilities to participate, information channels, rules and standards. The system used to allocate and administer funds, manage the buildings and rooms and provide teaching material works well. The relevant rooms are easily accessible and can be used by the students. There is solid access to relevant literature, materials and data. The institution uses efficient systems to manage funds and material resources which favour long-term documentation as well as reliable resource planning and management. There is a standardised procedure for recruiting academic staff members (especially teaching staff). The procedure is appropriate for choosing the best applicant both in terms of the subjects taught and teaching skills. (level 2)**

(The next level to attain would be:)...have been established and are controlled. This allows the institution to react to shortfalls in both material and human resources at short notice. Concerning the availability of teaching staff required to implement programme / course / training offers, the institution also reacts to quality-related divergences. Standardised procedures to fill vacancies and

reallocate academic employment positions are in use. The procedures to employ part-time or visiting teaching staff are guided by the intended learning outcomes of each course which the candidates are to teach. The funds and equipment are allocated in a way which supports the best possible achievement of the intended learning outcomes in each course on offer. The regular adaptation to internal and external legal and economic requirements is a fixed element in the institution's resource management procedures.

→ The predominant values and methods which guide most actions in managing material and human resources...**have a continuously visible positive effect on the intended outcomes. The resource-related information for relevant stakeholders, possibilities to participate and basic rules for the use of material resources have been set up effectively. The higher education institution has rules and guidelines on how to use the resources available, increase their efficiency and avoid misuse or waste (level 2).**

(The next level to attain would be:)...support the organisation as a whole in strategically directing the processes used to achieve the intended results. The institution management, its administration and the academic units cooperate well to eliminate any shortfalls without delay. The higher education institution successfully and without any contradiction applies the principles of academic freedom and how the teaching staff fit to the programmes / courses / trainings offered. The units/persons in charge are able to successfully moderate any conflicts regarding funds and material re-sources by compensating diverging interests. The higher education institution supports a careful and cooperative approach in using the resources available on all levels. It actively demands adherence to compliance-related rules and standards. The members of the higher education institution agree with the principles of how to use the resources available.

Recommendations

It should become visible to what extent students are informed about decisions on funds, when students interests (e.g. the appointment of teaching staff) are directly affected.

Evaluation Criterion III.2: Human resources development

Evaluation questions

Institutional dimension: What approaches and offers exist in terms of human resources development, especially in terms of technical development and teaching skills?

Procedural dimension: How does the institution implement its human resources development policy (processes)? Who is involved, who is responsible, and who is informed?

Cultural dimension: Which values and methodologies characterize how the members of the higher education institution deal with individual opportunities to develop and the individual need for development? Are the offers available used? If not, why? Are the target groups made aware of their opportunities for development?

Analysis and findings of the peers

FRI reports to consider staff development as part of its strategy. In a perspective on the institutional setting, the development of staff is supported by the FRI Human Resources and the FRI General Affairs. With regards to resources, FRI distributes a certain amount of funds to research laboratories with an assignment on human resource development. There are also special funds available to PhD-students and Young Researchers (for e.g. the attendance at conferences).

The faculty tries to assure that sabbaticals can be taken after five years for half a year. This depends on the availability of funds, which are not foreseen in the governmental funding scheme – therefore they have to be anticipated by the FRI budget. The candidates are selected by the FRI Governing Board within an application procedure. Although this includes no guarantee for the future, FRI could always manage to approve sabbaticals in the past since their establishment.

Motivated by the already described habilitation process, FRI staff has several options for personal improvement: International staff mobility, which is enabled by participation in e.g. the *Marie-Curie-* or the *Leonardo-da-Vinci-programme* and within the international partnerships, is a requirement for habilitation. There is also a fixed level for the attendance in courses for e.g. the development of skills in rhetoric and on other generic competences. Offers with a special focus on developing didactical skills are available in project KUL.

Additionally, FRI informs its staff about recent topics over the intranet and a newsletter, which is disseminated every morning.

Level of maturity observed

Overall, the peers consider the **organizational setting** to be implemented. The underlying **culture**, perceived by the peers in the awareness of faculty management concerning human resource development supports the efforts in a strategic sense. What is missing in the eyes of the peers is a more **process**-structured approach towards the development of human resources.

→ The organisational setting, structures, material and human resources for staff development...**have been implemented. The relevant concepts are effectively put into practice. The target group (e.g. teaching staff) has been informed about their opportunities and the offers available. The units/persons in charge fulfil their responsibilities on a regular basis (level 2).**

(The next level to attain would be...have been established and are controlled. The offer and development opportunities for teaching staff include developing skills which focus on the student and on the learning outcomes. This requires staff development concepts for all staff groups which are in line with the development aims of the institution.

→ Processes used to achieve the intended results in staff development...**have been defined. The responsibilities have been assigned. The possibilities to participate and information channels have been planned. The procedures, decision-making processes and information channels required to implement opportunities for teaching staff have also been defined (level 1).**

(The next level to attain would be:)...have been implemented. Those in charge fulfil their responsibilities. There are possibilities to participate and information is available. All teaching staff have access to the information and resources required (e.g. leave of absence, travel funds) to take part in training/further education opportunities.

→ The predominant values and methods which guide most actions in staff development...**support the organisation as a whole in strategically directing the processes used to achieve the intended results. The institution provides an environment in which its members can critically analyse their own achievements and qualifications and develop further without risking any disadvantages. The institution management takes and communicates a favourable view of the use of development opportunities. (level 3)**

(The next level to attain would be:)...support the organisation as a whole in acting in a predictive and proactive way. In order to do so, the institution considers the continued development and support of its teaching staff's subject-related and teaching skills a key element of its sustainability and compatibility with the developments of the national and international higher education area. This position is reflected in its staff development programmes and the respective policy on providing information.

Recommendations

In view of the peers human resource development should be supported by appropriate documentation of proceedings, beginning with the entry of staff members on certain positions. This could e.g. integrate information for new employees, proposed or recommended initial trainings and cyclical reviews of employee-performance (as stated in the Annual Report 2013).

Evaluation Criterion III.3: Research

Evaluation questions

Institutional dimension: What approaches, structural provisions and responsibilities exist to combine teaching and research within the institution?

Procedural dimension: What are the procedures to combine teaching and research within the institution like? Who is involved, who is responsible, and who is informed?

Cultural dimension: Which values and methodologies are supported when it comes to combining teaching and research? How does the co-operation between all groups involved work?

Analysis and findings of the peers

Being the strongest research faculty in computer sciences and informatics within Slovenia, FRI in general shows a high awareness concerning its' research performance. The faculty reports that funds distributed through calls and tenders by the Slovenian National Research Agency are decreasing as an impact of the economical crisis. Therefore FRI reports to adjust their strategic scope towards more international (EU-)projects (with an additional benefit for internationalization) and towards more applied projects increasing the transfer of knowledge in the private sector. The faculty is furthermore perceived to be aware about the prerequisites for a successful acquisition of research projects, aiming at the establishment of a research division (on its' own funds) supporting project-acquisition, management, reporting and exploitation of results. Furthermore FRI is attempting to strengthen research by contemporary monitoring of the individual performance of employed researchers and teaching staff (Annual Report 2013).

For quality assurance purposes, FRI formulates the objective of "incorporating the results of scientific research and professional activities in education". At the organisational level, the combination of research and teaching is represented in the research laboratories. Several research laboratories from the same areas are combined to a chair, which coordinates human resources needed for the implementation of courses. For the first cycle, research is implemented in the third year electives and in the graduate thesis. It is strengthened in the second cycle with the master thesis requiring some original research work. The PhD-programmes are permeated by research. On a personal level, the habilitation process ensures that teaching staff has research as well as teaching competences. Full time teachers have to perform nine hours of lectures per week – the remaining time is dedicated to research and professional activities. A reduction of teaching workload is possible if the projects justify this. Furthermore as already mentioned in chapter II.2, FRI reports to implement calls for the latest research topics in education.

Despite of measures like the FRI Student Council organising an annual presentation of research laboratories as well as challenges and competitions conducted by FRI and the annual compilation of the FRI Survey of Activities (presented in English), the faculty admits that information on research to students could be strengthened and developed further.

Level of maturity observed

The peers consider the **organisational setting** for the combination of research and teaching to be implemented. Furthermore there are **processes** visibly implemented guaranteeing the combination of research and teaching. That means research results diffusing into education not by chance or solely by motivation of individuals. The **cultural** values are considered to impact in a continuously visible effect. What prevents the peers from the next maturity level is the perception that FRI, under its demanding objectives for research and education, did not yet come to the final destination of the way chosen. In view of the peers, the connection between research and teaching should be developed further to strategic maturity.

→ The organisational setting, structures and resources required to combine teaching and research...**have been implemented. A plan to combine teaching and research is implemented. Those in charge fulfil their responsibilities. Research activities lead to stimuli for the planning and further development of course offers or teaching units (level 2).**

(The next level to attain would be:) ...have been established and are controlled. The institution is consistent in aligning its quality-related objectives for teaching and research with those defined for its programmes / courses / trainings. The development strategy and the effect it has on both areas are consistent.

→ Processes used to achieve the intended results in combining teaching and research...**have been implemented. The expected combination of teaching and research works well (level 2).**

(The next level to attain would be:) ...have been established and are controlled. The results and profiles which the involved academic units obtain from their research are included in the (further) development of programmes / courses / trainings on a regular basis. Findings from research activities are systematically used in teaching. The effect of this approach is assessed in quality management and self-evaluation procedures.

→ The predominant values and methods which guide most actions in combining teaching and research...**have a continuously visible positive effect on the intended outcomes. Students are made aware of the research activities that are carried out in their academic unit and at the institution in general. The members of the higher education institution and all relevant stakeholders are informed about their tasks and opportunities as well as about the objectives of the institution in terms of combining teaching and research. Wherever possible, the teaching staff allows the students to participate in their research activities during any stage of the course. (level 2)**

(The next level to attain would be:)...support the organisation as a whole in strategically directing the processes used to achieve the intended results. The higher education institution management and the management staff in general support and communicate an approach of mutual appreciation between teaching and research as well as an increased combination of the two.

Recommendations

No specific recommendations are derived from this chapter.

Evaluation Criterion III.4: Administration:

Evaluation questions

Institutional dimension: What are the guiding principles and rules for the role and function of the administration in teaching and learning? What is the respective organisational setting (responsibilities)?

Procedural dimension: How are the individual administrative units involved in the processes of introducing, (further) developing and implementing programmes / courses / trainings as well as in their quality assurance? Who is involved, who is responsible, and who is informed?

Cultural dimension: Which values and methodologies are characteristic for the role of the administration in the processes of introducing, (further) developing and implementing programmes / courses / trainings as well as in their quality assurance? Which attitudes and methods are supported? How does the co-operation between all groups involved work? Are the set rules and guidelines accepted by those affected by them? How are conflicts handled?

Analysis and findings of the peers

FRI's administrative support is structured in the FRI Secretary's Office, headed by the FRI Secretary. This includes the FRI Deans Office (supporting the FRI government structure), the FRI Student Affairs, FRI Accounting and Finance, FRI Human Resources and General Affairs, FRI Library (providing literature access and bibliographic data of researcher), FRI Press, IT Support Services and FRI Maintenance. FRI reports to offer development initiatives for employees in these functional areas.

The FRI Student Affairs has five employees in total, whose division of labour is structured by educational cycles. Two employees are responsible for support for first cycle students, one for the master's programmes, one for PhD-students and one for statistics. FRI mentions this office to participate in the pedagogical conference, thereby fostering a better mutual understanding of perspectives and problems. The FRI Student Affairs is frequently awarded by UL and FRI Student Councils for its services (II.6). FRI further employs a Communication Office responsible for public relations of the faculty and the dissemination of information to internal stakeholders. The Communications Office is also conducting the advertising measures for FRI's study programmes and it is supporting the already mentioned FRI Alumni Club (I.2). The peers recognize students reporting on a significantly enhanced communication of the faculty. While the former situation was described as being slightly intransparent, up to now students feel well informed by mailing lists, facebook and information events. Furthermore, FRI is attempting to implement a supporting structure for its research activities (III.3).

Overall, with less than one fifth of the total faculty staff working in administrative units, the peers take into account the slim but apparently effective administrative structure. FRI reports on its plans for further development, desiring personal career plans and annual performance reviews

for administrative staff. To foster communication between academic and administrative units, there are also workshops available in project KUL. In a cultural perspective, the peers in general appreciate team building events like the annual staff picnic.

Level of maturity observed

The peers consider the **organizational setting** and the **processes** of administrative support services to be implemented. Furthermore FRI visibly conducts measures to enhance a **culture** of co-operation between administrative and academic fields. What they are missing to label those aspects as *established and controlled* is a more visible approach towards structured and easily accessible processes depicting the co-operation between academics and administration.

→ The organisational setting, structures and resources required for the administration to support teaching and learning...**have been implemented. The administration is suitably structured and equipped to act as a (service) provider of the key processes of the institution (level 2).**

(The next level to attain would be:)...have been established and are controlled. As for the programmes / courses / trainings on offer, the administration supports their preparation, implementation and quality management both on an organisational level and with the data and information required.

→ Processes required for the administration to support teaching and learning as envisaged...**have been implemented. The individual administrative units have successfully been involved in the processes of introducing, developing (further) and implementing programmes / courses / trainings (level 2).**

(The next level to attain would be:)...have been established and are controlled. In administration, the budget, human resources and staff development activities are also planned according to their efficiency in supporting teaching and learning.

→ With regard to the desired supporting role which the administration is intended play in teaching and learning, the predominant values and methods which guide most actions...**have a continuously visible positive effect. The expectations as to the administrative staff's role in the creation, implementation, further development and quality assurance of course offers are coherent and have been communicated. The higher education institution management ensures that the administration is aware of the institution's quality-related objectives for teaching and learning. The teaching staff and students have been informed about the responsibilities and contact persons working in administration (level 2).**

(The next level to attain would be:)...assist the organisation as a whole in strategically directing support processes. The higher education institution supports horizontal and independent co-

operations between the administration and academic units. The administration and academic units/teaching staff support each other.

Recommendations

The peers strongly support the attempt of FRI to implement a more structured approach towards business process management.

Results on Criterion III.5: Monitoring/self-examination

Evaluation questions

Who monitors how and at what point whether the principles are complied with and whether the resources are used in an effective and efficient way? Who monitors how and at what point whether the intended results in the use of resources are achieved? What happens to the results of such monitoring (follow-up procedure, timescale, persons involved)?

Analysis of the peers

In the annual report, which is compiled in a self evaluation procedure by the CMQS, the single monitoring and evaluation activities of FRI converge. In addition to information on strategic and quality management activities, educational and research performance as well as on development activities the report contains information on human resources and on financial accounting. In the first line, this report is reviewed by the FRI management, the FRI Governing Board and the FRI Senate, who are responsible for an effective and efficient allocation of resources. FRI also reports to undergo an external monitoring procedure in a periodical financial audit by the UL and by the already mentioned institutional evaluation by the SQAA.

Level of maturity observed

The peers consider the rules, responsibilities, procedures and decision-making processes to review and adapt the management of both material and human resources to be implemented. To label them as established and controlled, a stronger relation of monitoring procedures towards the defined objectives (as presented in chapter I.1) has to be shown.

→ The rules, responsibilities, procedures and decision-making processes to review and adapt the management of both material and human resources...**have been implemented and take into consideration both the efficiency and the effect with which the resources are allocated. There are quality-related expectations and criteria for reciprocal effects of staff resources, staff devel-**

opment, funds, equipment and the combination of teaching and administration and the quality of the programmes / courses / trainings offered (level 2).

(The next level to attain would be:)...have been established and are controlled. Where necessary, the institution systematically adopts measures to manage its resources in a way to eliminate any quality-related defects and make improvements. The institution has the necessary data to safeguard and provide reasons for the material and human resources required.

Recommendations

To stronger align quality monitoring procedures and the faculty's objectives as presented in chapter I.1 was already mentioned in chapter I.3. There are no further recommendations deriving from this chapter in addition to that.

IV. Transparency and documentation

Evaluation Criterion IV.1: Rules and regulations for programmes / courses / trainings
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Evaluation questions

Institutional dimension: Which rules and regulations for programmes / courses / trainings have been defined? Who do they affect? Which units of the organizational setting are responsible?

Procedural dimension: How are the documents that set the rules for studying at the institution developed? How are they published and updated? Who is involved, who is responsible, and who is informed? How are the members of the higher education institution and relevant stakeholders informed about the rules and regulations for programmes / courses / trainings that affect them? How does the institution integrate external (e.g. legal) requirements into the processes?

Cultural dimension: Which values and methodologies are characteristic for the role of the administration in the processes of introducing, (further) developing and implementing programmes / courses / trainings as well as in their quality assurance? Which attitudes and methods are supported? How does the co-operation between all groups involved work? Are the set rules and guidelines accepted by those affected by them? How are conflicts handled?

Analysis and findings of the peers

FRI organises and implements the first cycle higher education professional and academic study programmes and the second cycle master study programmes as well as programmes of further training according to the Slovene Higher Education Act. The main document for coordination of the educational programmes are the *FRI Study Rules and Regulations (2012)*, which affects all internal stakeholders in the student life cycle. This document is backed-up by detailed and stakeholder specific regulations for final theses (specific for every cycle) and instructions for the preparation and the grading of these theses. Updates of rules for the first two cycles are conducted in responsibility of the Committee for Student Affairs, where student members are present. For the third cycle programmes in responsibility of the FRI Committee for Research and Doctoral Studies, the already mentioned lack of integration of doctoral students into the governing structure of FRI (I.2) counts for the processes of developing study related rules as well.

Level of maturity observed

Especially regarding the **institutional setting**, the peers appreciate FRI to emphasize the quality of final theses in relation to defined programme outcomes by regulations and instructions. They therefore consider this setting to be established and controlled. Concerning the **procedures** of developing rules and regulations for the educational programmes, the peers detected a lack of integration of PhD-students into the governing structure. They therefore do not want to go fur-

ther than to label procedures as implemented, because with regards to doctoral students, it is not visible to what extent their feedback is considered. The same argumentation counts for integration factor provided by the organization's **culture** as well.

→ The organizational setting, structures and resources required for documents containing the rules for programmes / courses / trainings...**have been established and are controlled. Information obtained from quality assurance is also used to further develop these documents (level 3).**

(The next level to attain would be:)...are developed further in a predictive and proactive way.

→ Processes used to achieve the intended results in terms of rules and the documentation about programmes / courses / trainings on offer...**have been implemented. The information channels and the collaboration to create and develop the documents containing the rules of a course work well. Those in charge fulfill their responsibilities. External (e.g. legal) requirements are integrated into the process of creating and developing the documents containing the rules of a course on a regular basis. (level 2)**

(The next level to attain would be:)...have been established and are controlled. Relevant information obtained from quality assurance (especially feedback from students and teaching staff) are taken into consideration when creating and developing the documents containing the rules of a course.

→ The predominant values and methods which guide most actions...**have a continuously visible positive effect on the intended outcomes. The teaching staff and students are informed about existing documents containing the rules of a course and any changes to such documents (level 2).**

(The next level to attain would be:)...support the organisation as a whole in strategically directing the processes used to achieve the intended results. The teaching staff and students are involved in the creation or modification of all documents containing the rules of a course.

Recommendations

The recommendation regarding the integration of doctoral students (1.2) counts for the development procedures of study-related rules as well. There are no further recommendations derived from this chapter.

Evaluation Criterion IV.2: Documentation

Evaluation questions

Institutional dimension: How are document management and filing systems organized? What are the guiding principles, rules and responsibilities? Which material and human resources are available?

Procedural dimension: What procedures do the documentation and filing of information involve, especially in teaching and learning and regarding programmes / courses / trainings? Who is involved, who is responsible, and who is informed? How are the members of the higher education institution and relevant stakeholders informed about programmes / courses / trainings on offer and their requirements within the institution? How are the external requirements for transparency and documentation which are relevant to the institution (e.g. disclosure obligations and voluntary publication) taken into account?

Cultural dimension: To what extent are the members of the higher education institution and relevant stakeholders informed about programmes / courses / trainings and their requirements within the institution? What is the institution's policy on providing information within and outside the institution? Which attitudes and methods are supported in its members?

Analysis and findings of the peers

FRI's approach for document management is structured by the *FRI Regulations for Documentation Management*. The document management system consists of the following sources: An important tool containing personal documentation files for all stakeholders within the faculty is the FRI-Study-Information-System. FRI reports on processes to be implemented how these data is administered by different stakeholders (e.g. the administration of exams). Educational materials are distributed by the eClassroom (virtual learning environment). FRI further uses a digital repository to file students' final theses. Finally there is a system in use dedicated to financial accounting. In a cultural perspective, FRI reports to advocate the openness of information with respect to the protection of personal data. The peers see this overall transparency confirmed e.g. in the handling of minutes.

Level of maturity observed

The peers consider the institutional setting and the procedures for the management of documents to be implemented and the underlying values to impact in a positive effect.

→ The organizational setting, structures and resources required to organize documents and filing systems...**have been implemented, i.e. the organisation of documents and filing systems works**

as envisaged and in an efficient way. As a general rule, the different units and panels within the institution work with the principle of documentation when planning and implementing programmes / courses / trainings as well as in their quality assurance. The documentation and filing systems work and are in line with the respective legal and functional requirements (level 2).

(The next level to attain would be:)...have been established and are controlled. The institution has a system which manages all central documents and supports the processes of planning, implementing course offers and developing them further. The system also provides the units/persons in charge with the information they need to adopt measures.

→ Processes used to achieve the intended results in the organization of documents and filing systems...**have been implemented. The management, administration, teaching staff and students involved have access to the documents relevant to them. All decisions are documented. Reasons are given for all decisions which have an impact on teaching staff and students. External requirements for documentation and transparency are continuously taken into consideration in the respective processes. (level 2)**

(The next level to attain would be:)...have been established and are controlled. In order to do so, the institution internally and externally provides target-group specific information about the programmes / courses / trainings on offer and their quality.

→ The predominant values and methods which guide most actions in the organization of documents and filing systems...**have a positive effect on the intended outcomes that becomes evident in some areas. The minimum requirements as to the form and quality of documents created and used have been communicated. (level 1)**

(The next level to attain would be:)...have a continuously visible positive effect on the intended outcomes. The members of the higher education institution are aware of the minimum requirements as to the form and quality of documentation in their area of activity. The target group (especially students and course applicants), other higher education institutions and the labour market receive clear, relevant and useful information.

Recommendations

There are no specific recommendations derived from this chapter.

Results on Criterion 3: Monitoring/self-examination

Questions

Who monitors how and at what point whether the objectives and outcomes aimed at in the creation and further development of programmes / courses / trainings, organization (implementing the offer), co-operations, examination systems and organization of exams, recognition of

achievements, assistance and advice are achieved? What happens to the results of such monitoring (procedure, when, who)?

Analysis and findings of the peers

Responsible for monitoring of FRI rules and regulations is the FRI management, the FRI Senate and the FRI Secretary, who checks the legal conformity of rules and regulations. With regards to the impact of rules on the objectives and outcomes of the faculty, the responsible committee is the CMQS. In the eyes of the peers it is an effective approach to install a commission representing the internal stakeholder views, which is independent from the faculty management. But as already mentioned, the compilation of the faculty's annual report could show a more explicit relation between the defined objectives and evidences for progress towards them. In line with that, a more process oriented approach towards the management of documents could be developed, providing documents specifically for certain stages of the faculty's business processes.

Level of maturity observed

The peers are convinced that monitoring procedures are implemented. To achieve the next level of maturity, a feasible way would be to keep establishing the already begun implementation of a business management approach. This would be a user friendly way of arranging documents.

The rules, responsibilities, procedures and decision-making processes to review and adapt the institution's documentation management approach...**have been implemented and take into consideration both the efficiency and the effect with which the resources are allocated. The type and quality of documents used are assessed by the competent units on a regular basis. (level 2)**

(The next level to attain would be:)...have been established and are controlled. Where necessary, the institution systematically adopts measures to manage its documents in a way to eliminate any quality-related defects and make improvements (e.g. make sure they are up-to-date, accessible, reliable and comprehensible). All self-evaluation processes at the institution are based on evidence.

Recommendations

There are no specific recommendations derived from this chapter.

Appendix: Documents and Interview Partners

Documents provided by UL FRI

Self-assessment report for the purpose of ASIIN evaluation, 6th of Feb 2014

Appendices:

A01 UL FRI Survey of Activities, 2012

A02 FRI Regulations of Sabbatical, 2012

A03 FRI Criteria for Research Titles, 2006

A04 Instructions for the Grading of Graduate Theses at FRI

A05 FRI Strategy 2011

A06 FRI Business Report 2012

A07 FRI Self-Evaluation Report 2012

A08 FRI Statutes, 2013

A09 UL Quality Assurance System Regulation, 2008

A10 UL Habilitation Criteria, 2011

A11 UL Habilitation Criteria Amendments, 2012

A12 FRI Interpretation Of Habilitation Criteria, 2012

A13 FRI Dean Election Rules

A14 FRI Senate Election Rules

A15 FRI Student's Council Regulations

A16 FRI Student's Council Election Rules

A17 First cycle university study programme Computer and information Science, 2013

A18 First cycle professional study programme Computer and Information Science, 2013

A19 Second cycle master study programme Computer and Information Science, 2013

A20 Third cycle doctoral study programme Computer and Information Science, 2013

A21 FRI Study Rules and Regulations, 2012

A22 Regulations of the Doctoral Study at FRI, 2013

A23 Regulations for the Graduate Thesis of the FRI first Cycle Study Programmes, 2013

A24 Regulations for the Master Thesis of FRI Study Programmes, 2013

A25 Instructions for the Preparation of Graduate Thesis at FRI

A26 Instructions for the Preparation of Master Thesis at FRI

A27 Instructions for the Doctoral Study at FRI

List of participants from UL and UL FRI

Day 1, Wednesday 16 April 2014

Morning, before 9am: welcome greeting

Prof. Dr. Marko Robnik-Šikonja, president of UL FRI Quality Committee
Jerca Tekavec, MA, evaluation support

Afternoon, 13:00-13:30: Brief presentation by management of university and faculty, questions

Afternoon, 13:30-14:30: Quality Management (Objectives, Governance)

Prof. Dr. Goran Turk, Vice Rector of UL
Prof. Dr. Marinka Drobnič-Košorok, president of UL Quality Committee
Mihaela Bauman Podojsteršek, Rector's Assistant for Finance
Polonca Miklavc Valenčič, Secretary General, Quality Department
Katja Kamšek, UL Quality Department
Prof. Dr. Nikolaj Zimic, Dean of UL FRI
Prof. Dr. Patricio Bulić, Vice Dean for Development
Prof. Dr. Neža Mramor-Kosta, Vice Dean for Education
Prof. Dr. Matjaž Jurič, Vice Dean for Research
Nives Macerl, UL FRI Secretary
Prof. Dr. Marko Robnik-Šikonja, president of UL FRI Quality Committee

Afternoon, 14:45-15:45: Quality Management (Objectives, System)

Prof. Dr. Nikolaj Zimic, Dean of UL FRI
Prof. Dr. Patricio Bulić, Vice Dean for Development
Prof. Dr. Neža Mramor-Kosta, Vice Dean for Education
Prof. Dr. Matjaž Jurič, Vice Dean for Research
Nives Macerl, UL FRI Secretary
Prof. Dr. Marko Robnik-Šikonja, president of UL FRI Quality Committee
Doc. Dr. Polona Oblak, vice president of UL FRI Quality Committee
Prof. Dr. Borut Robič, member of UL FRI Quality Committee
Doc. Dr. Damjan Vavpotič, member of UL FRI Quality Committee
Doc. Dr. Mira Trebar, member of UL FRI Quality Committee
Mag. Marija Valentinčič-Pregelj, member of UL FRI Quality Committee

Afternoon, 16:00-17:30: Educational Programmes/Courses/Trainings (creation, implementation, cooperations, examinations, recognition of achievements)

Prof. Dr. Neža Mramor-Kosta, Vice Dean for Education
Prof. Dr. Borut Robič, president of UL FRI Curricular Committee
Prof. Dr. Uroš Lotrič, vice president of UL FRI Curricular Committee
Prof. Dr. Gašper Fijavž, member of UL FRI Curricular, study programme coordinator
Doc. Dr. Zoran Bosnić, member of UL FRI Curricular Committee, study programme coordinator
Mag. Marija Valentinčič-Pregelj, Head of Student Office

Evening: joint dinner, ASIIN evaluation team + UL FRI

Day 2, Thursday 17 April 2014

Morning, 9:00-10:00: Educational Programmes/Courses/Trainings (creation, implementation, examinations)

Management of resources (Material and human resources, HR resources development, re-research, administration)

Prof. Dr. Bojan Orel, lecturer, president of UL FRI Governing Board,

Prof. Dr. Franc Solina, lecturer

Prof. Dr. Branko Šter, lecturer

Doc. Dr. Danijel Skočaj, lecturer

Doc. Dr. Tomaž Curk, lecturer

Doc. Dr. Matej Kristan, lecturer

Doc. Dr. Matjaž Kukar, lecturer

Doc. Dr. Jurij Mihelič; Assistant

Doc. Dr. Tomaž Dobravec, Assistant

Dr. Uroš Čibej, Assistant

Dr. Matjaž Pančur, Assistant

Jure Žbontar, BSc, Assistant

Bojan Klemenc, BSc, Assistant

Nejc Ilc, BSc, Assistant

Mag. Marija Valentinčič-Pregelj, Head of Student Affairs Office

Lucija Završnik Čučkin, Head of Dean's Office

Bojan Heric, Assistant Secretary for Accounting and Finance

Jasna Bevk, administrative support for research projects

Morning, 10:15-11:00: Educational Programmes/Courses/Trainings (creation, implementation, cooperations, examinations, recognition of achievements)

Mag. Aleš Špetič, president of Alumni UL FRI club

Mag. Dušan Omerčević, member of Alumni UL FRI club

Matevž Černe (president of UL FRI Student Council, 1st year, 2nd cycle)

Nina Mrzelj (member of UL FRI Student Council, 2nd year, 1st cycle)

Milutin Spasić (member of UL FRI Student Council, 3rd year, 1st cycle)

Ernest Beličič (3rd year, 1st cycle)

Sašo Stanovnik (2nd year, 1st cycle)

Dejan Ozebek (1st year, 1st cycle)

Saša Špiler (3rd year 1st cycle)

Vida Groznik (3rd year, doctoral study)

Tom Vodopivec (3rd year, doctoral study)

Morning, 11:15-12:00: Management of resources (material and human resources, HR development)

Transparency and documentation (rules and regulations, documentation)

Prof. Dr. Nikolaj Zimic, Dean of UL FRI

Prof. Dr. Patricio Bulić, Vice Dean for Development

Prof. Dr. Neža Mramor-Kosta, Vice Dean for Education

Prof. Dr. Marko Bajec, Vice Dean for Economic Affairs

Prof. Dr. Matjaž Jurič, Vice Dean for Research

Nives Macerl, UL FRI Secretary

Prof. Dr. Marko Robnik-Šikonja, president of UL FRI Quality Committee
Prof. Dr. Miha Mraz, president of Human Resources Committee

Afternoon, 13:30-14:30: "Joker Session" (visit to the new UL FRI premises, business processes reengineering and cooperation with companies)

Prof. Dr. Nikolaj Zimic, Dean of UL FRI
Prof. Dr. Patricio Bulić, Vice Dean for Development
Prof. Dr. Matjaž Jurič, Vice Dean for Research
Prof. Dr. Marko Bajec, Vice Dean for Economic Affairs
Prof. Dr. Neža Mramor-Kosta, Vice Dean for Education
Prof. Dr. Marko Robnik-Šikonja, president of UL FRI Quality Committee

Afternoon, 15:30-16:00: Feedback

Polonca Miklavc Valenčič, Assistant Secretary General of UL
Prof. Dr. Marinka Drobnič-Košorok, president of UL Quality Committee
Katja Kamšek, UL Quality Department
Prof. Dr. Nikolaj Zimic, Dean of UL FRI
Prof. Dr. Patricio Bulić, Vice Dean for Development
Prof. Dr. Neža Mramor-Kosta, Vice Dean for Education
Prof. Dr. Marko Bajec, Vice Dean for Economic Affairs
Prof. Dr. Matjaž Jurič, Vice Dean for Research
Nives Macerl, UL FRI Secretary
Prof. Dr. Bojan Orel, lecturer, president of UL FRI Governing Board
Matevž Černe (student, president of UL FRI Student Council, 1st year, 2nd cycle)
Prof. Dr. Marko Robnik-Šikonja, president of UL FRI Quality Committee
Doc. Dr. Polona Oblak, vice president of UL FRI Quality Committee