

## **RISK MANAGEMENT IN THE SYSTEM OF INTERNAL QUALITY ASSURANCE OF HIGHER EDUCATION INSTITUTIONS**

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### **Abstract**

The concept of risk management is present in quality assurance of higher education institutions in different scope and scale, seeking the rationality of its use in effectiveness and innovation in internal quality assurance systems. The paper argues that the risk management in internal quality assurance could be introduced in different ways, including: top down and bottom up approaches. Based on the case study from Warsaw University of Life Sciences-SGGW it also explains how risk management could be implemented as the innovative tool.

**Key words:** risk, risk management, quality assurance, higher education institution, WULS-SGGW

**JEL classification:** O31, P36, I20

**LCC code:** HD 61

### **Introduction**

Higher Education Institutions (HEI) like organizations from other sectors constantly are challenging to adjust to growing competitive market [Mok and Wei, 2008; Michelsen, 2010]. There are many factors that strengthen the competition: demography, new generations' attitudes, technologies, labor market requirements, just to mention the most demanding [Stimac and Katic, 2015, Harvey and Williams, 2010]. Thus, HEI in order to develop are continuously changing their strategies to adjust to turbulent conditions [Celinska and Swazo, 2015]. From this point of view the assurance of the highest quality of academic services has been recognized and used as one of the most important sources of a competitive power [Filippakou and Tapper 2010]. And although the quality assurance is driving the academic tradition, the nowadays understanding what is should be to fulfill the market requirements is requiring other approach. The shift needs to be made from informal academic habits to formal institutions, from unwritten norms to written standards, from corporate customs to formal management systems. The challenge is all the greater that these changes should preserve academic freedom, to still associate the academy as a free community of thought, not make it a bureaucratic corporation of do's and don'ts highly ranked in a worldwide rankings.

The later assessment of the changes of the HEI quality assurance is often expressed once new and more complex standards and guidelines are released, regardless the country or region worldwide [Cross and Naidoo, 2011; Serrano-Valarde and Stensaker, 2010; Mulvey et al., 2011]. These top down changes should be seen however as a support to bottom up approaches of the educational market actors on their road to rationalization. HEI in order to succeed, need to use opportunities and interpret the rules of the market game at times by innovating their traditional frameworks. They as rational and strategically skilled market actors, should be

capable of exploiting opportunities and limit threats coming from their competitive environment.

In this respect HEI sector in global perspective is following the progress steps that other sectors already made in developing both regulatory framework and institutional practices for quality assurance, i.e. food as more traditional and ICT as more contemporary. This is observed by the development, copying or adapting of standards and practices in order to increase the maturity of the quality management and the maturity of the quality culture of HEI. There are different types of innovations developed and one can observe significant differences in diffusion of these innovations under the umbrella of quality assurance. In the more quality matured sectors the quality assurance is directly transmitted into the market position. In this respect one need to remember that the condition of each change is its acceptance and use in a rational way by the market actors. Thus the changes imposed by law a lot harder undergo the processes of diffusion. Although the law is to follow, its effectiveness, or is a facade, either directly is small or non-existent. On this ground, Kis [2005] in her review of the situation in the OECD countries explained and argued, that in most cases especially external reviews carry the situation of 'game playing' and 'impression management'. One of the disadvantages reported by the opponents of external reviews is that it promotes 'game playing' and compliance instead of quality improvement. It is pointed out, which in most European HEI is truth, that one of the dangers of over-elaborate bureaucratic systems of external monitoring is that they can lead to a 'compliance culture' to the detriment of real quality improvement.

Thus, under the growing expectations for quality assurance the changes are also required with respect to risk management. HEI have for a long time managed risk successfully. The effective strategy to risk management was based on conservative approach to changes. Today's approach should be more pro-active and as such needs to consider risk as a managed element of the quality of HEI, not only with respect to strategic level, but also to operational level of internal quality assurance (IQA) systems. As such, risk management should be considered as an organizational and process innovation in IQA, but so far is not conscious or not effective yet in many HEI.

### **Objectives, Materials and Methods**

The paper main objective is to present the approach to risk in the development of IQA in HEI. The specific objectives are threefold. Firstly it aims to present the principles and approaches to risk used in other then HEI sectors, by the critical review, from the perspective of HEI, of the International Organisation for Standardisation (ISO) guidelines for risk management. Secondly to present the state of the art of the approaches to risk in HEI on the selected examples. And finally to present the example of Warsaw University of Life Sciences - SGGW in which IQA's the risk is recognized and treated in a process way. The critical review of selected standards and practices as well as case study methods will form as the basis of the analysis.

### **The business concept of risk and risk management**

Every individual and every organization in a competitive environment are exposed to a situation that poses a level of threat, defined often as a hazard, which probability and magnitude is different. They vulnerability to this hazards is also different, therefore there is a rational requirement to analyze the impact of the hazard and take appropriate measures. HEI like other organizations are not excluded from this approach, and apply it either as involuntary element

of self-preservation or as a conscious action. The more activities are organized, the processes associated with risk are more mature and better risk-managed.

There are many definitions of risk and risk management. The definition set out in ISO Guide 73 is that risk is the “effect of uncertainty on objectives”. It is stressed that an effect may be positive, negative or a deviation from the expected, and that risk is often described by an event, a change in circumstances or a consequence. The consequences of a risk materializing may be negative (hazard risks), positive (opportunity risks) or may result in greater uncertainty. Risk perception can be quantitative, semi-quantitative or qualitative in terms of the likelihood of occurrence and the possible consequences or impact.

As explained by Hopkin [2010] organizations face a very wide range of risks that can impact the outcome of their operations. The desired overall aim may be stated as a mission or a set of corporate objectives. The events that can impact an organization may inhibit what it is seeking to achieve (hazard risks), enhance that aim (opportunity risks), or create uncertainty about the outcomes (control risks). Therefore risk management needs to offer an integrated approach to the evaluation, control and monitoring of these three types of risk. The risk management process is well established, although it is presented in a number of different ways and often uses differing terminologies. Nonetheless of semantics the risk management process cannot take place in isolation. It needs to be supported by a framework within the organization. The key components of a successful risk management framework are the communications and reporting structure (architecture), the overall risk management strategy that is set by the organization (strategy) and the set of guidelines and procedures (protocols) that have been established.

The combination of risk management processes, together with a description of the framework in place for supporting the process, constitutes a risk management standard. There are several risk management standards in existence, including the IRM Standard and the recently published British Standard BS 31100. There is also the American COSO ERM framework. The latest addition to the available risk management standards is the international standard, ISO 31000 “Risk management – Principles and guidelines”, published in 2009. The well-established and respected Australian Standard AS 4360 (2004) was withdrawn in 2009 in favor of ISO 31000. AS 4360 was first published in 1995 and ISO 31000 includes many of the features and offers a similar approach to that previously described in AS 4360.

In the ISO 31000 the risk management is a described as a process that is underpinned by a set of principles. It is stressed that it needs to be supported by a structure that is appropriate to the organisation and its external environment or context. A successful risk management initiative should be proportionate to the level of risk in the organisation (as related to the size, nature and complexity of the organisation), aligned with other corporate activities, comprehensive in its scope, embedded into routine activities and dynamic by being responsive to changing circumstances. Additionally the ISO 31000 emphasizes that risk management should be a continuous process that supports the development and implementation of the strategy of an organisation. It should be the process in which organisations methodically address the risks attached to their activities. It should focus of two principal synergic activities, namely: the assessment of significant risks and the implementation of suitable risk responses. The objective of both is to achieve maximum sustainable value from all the activities of the organisation.

On other hand, the risk management enhances the understanding of the potential upside and downside of the factors that can affect an organisation. In all types of activities and processes, there is the potential for events that constitute opportunities for benefit (upside) and threats to

success (downside). Thus, the risk management increases the probability of success and reduces both the probability of failure and the level of uncertainty associated with achieving the objectives of the organisation.

Risk management is an increasingly important business driver and not only organizations but also its stakeholders have become much more concerned about risk. Risk may be a driver of strategic decisions or it may be included in the activities of the organisation. An enterprise-wide approach to risk management enables an organisation to consider the potential impact of all types of risks on all processes, activities, stakeholders, products and services. The necessary condition is to understand the risks being taken when seeking to achieve organization objectives. Further it is important to recognize and prioritize significant risks and identify the weakest critical controls. The outputs from successful risk management include compliance, assurance and enhanced decision-making [AIRMIC 2010].

The above principles of risk management set for business organization, although not expressed in direct way, forms also a basis for understanding and practice for quality assurance in HEI. In this year revised and approved in Yerevan the European Standards and Guidelines in part 1 there are set principles that are in line with ISO 31000 whereas defining the conditions of quality management: policy and objectives, structure, processes and resources finally monitoring and corrective and developing actions. Thus an approach to risk is somehow included in this standards, and accordingly the business principles of risk management could be used as complementary set of principles that strengthen the achievements of HEIs objectives.

### **Approaches to risk in systems of HEIs quality assurance**

There could be identified two primary approaches to risk management within the nowadays higher education systems: top down – when risk management is a part of sector regulatory regime; and bottom up – when the institutions develop risk management framework and voluntarily incorporate it into IQA and through supports the compliance with the regulations.

Within the top down frameworks there could be identified two different approaches: rigid and flexible. The first one is a case for Australia, where rigid framework was introduced in 2012 [TEQSA 2016]. The Tertiary Education Quality and Standards Agency (TEQSA), which is Australia's independent national regulator of the higher education sector has attempted a risk-based approach to quality assurance in HEI. Its initial approach was to assess the risk by casting an expert judgment on a set of strict 46 quantitative and qualitative indicators collected by HEI annually and afterwards externally awarding a 'traffic light' risk score. Overall judgement was made concerning the risk to students, risk of HEI collapse and risk to sector reputation. All HEI would still receive cyclical reviews, the intensity of these however would be dictated by risk as would the need for any mid-cycle intervention. The indicators were designed to detect current and future risks. However strong complaints from the sector led to a review after one year of implemented risk assessment framework and its overall effectiveness. In March 2014 TEQSA published a simplified and more robust regulatory risk framework. The annual review is holistically rated red, amber or green using professional judgement having reviewed the prescribed set of indicators, the thresholds for which are not published and are determined subjectively. The indicators continue to be a mix of input and output measure but have now been reduced to 20 and HEI has got the chance to undertake the dialogue for their interpretation and assessment. TEQSA focuses on four key areas in risk assessments to support the overall evaluation: regulatory history and standing; students (load, experience and outcomes);

academic staff profile; and financial viability and sustainability. The Australian approach is in line with the scheme type 6 of the ISO 17067 Conformity assessment standard, in which there is undertaken initial and periodic assessment of service or process plus initial assessment and periodic auditing of management system.

More flexible approach within the top down framework is represented by the case of the United Kingdom regulation. It is also in line with the scheme type 6 of the ISO 17067. In 2000, the Higher Education Funding Council of England (HEFCE) required all universities to implement risk management as a governance tool since it expected an increase in efficiency in decision making. Risk based regulation has been promoted as an economically rational decision making instrument for managing the difficult trade-offs between competing priorities that are inherent in any regulatory activity. In 2001 HEFCE published the document "Risk management: a guide to good practice". This guide provides practical guidance in a form of quality standards to higher education institutions at all stages of planning and implementing risk management. Its primary audience was the institution's project manager who has been appointed to plan, launch and manage the risk management program. The guide has been written with the benefit of a firsthand knowledge of risk management in both the public and private sectors. It was assumed that there is no single correct approach. HEFCE however where possible have provided examples of best practices coming mostly from the findings of a 1999 risk management survey of 91 HEI.

In the above presented examples the risk management become the requirement for HEI. Undoubtedly the implementation of this obligation was associated with the negative feedback, as any change in status quo prompts an opposing reaction in the responding system, hence recognizing universities as a conservative organizations. In order to meet the requirements HEI for their internal use have identified and understood the risk in different ways not always conscious and rationale, and through have not increased the maturity of the quality assurance internal processes driven by the risk management. The interest, knowledge capacity and structural particularities of universities, just point a few reasons mentioned in the literature [see: Huber 2011, Raban 2011, Rothstein 2011], provided the foundation for the development of framework that fulfils regulations but not brings required change.

From the other hand it is quite difficult to find detailed descriptions of the bottom up approach to risk management in HEIs internal quality management systems [Liu 2015]. Thus is due to the fact that those solutions are developed internally and serve as an option, a kind of alternative way to management according to external requirements. This kind of management practices mature together with the concept of quality management in HEI, not for external audits, but as a real tool for assurance and development of quality. In a time, due to the diffusion process, they become an element of the quality culture. In a formal way they might be introduced in the official documentation of the quality assurance systems, but this takes place mostly, when the organization processes reach higher levels of their maturity [see Maciejczak 2014].

### **Bottom up approach to risk in quality assurance in WULS-SGGW – a case study**

Internal Quality assurance in Polish HEI As reviewed by Kwiatkowska-Sujka and Socha [2015] before central regulations came into force in 2007 some Polish HEIs had developed IQAs on their own initiatives. In accordance with the regulation of the Minister of Science and Higher Education of 12 July 2007 on education standards [Regulation ... 2007], HEIs have been obliged to ensure high quality education and to introduce internal quality assurance systems. After the amendment in 2011 of the Law on Higher Education [Law ... 2005], the obligation to

have internal quality assurance systems in place has been stipulated in the Regulation on the conditions for the provision of degree programmes in a specific field and at a specific level of study, which stipulates that "An academic unit may provide first-cycle programmes or second-cycle programmes, if it has implemented an internal quality assurance system, including actions aimed at the enhancement of the teaching programme in the field of study provided". Some elements of the system, such as student opinion questionnaires and periodical academic staff evaluations or monitoring the careers of graduates, have been defined as indispensable preconditions in the Law on Higher Education. Moreover, particular elements of the system have been identified in the implementing regulations of Minister of Science and Higher Education as well as the Polish Accreditation Committee's institutional evaluation criteria, which stipulate that academic units under evaluation should have efficient internal education quality assurance systems in place. HEIs develop their own quality assurance systems which take into account the individual characteristics of a HEI, its mission statement, education profile, population of students, staff, academic tradition and external conditions.

According to results of the survey conducted in 2015 among Polish HEI done in frames of the EIQAS project [Kwiatkowska-Sujka and Socha 2015] out of 116 responding for the questionnaire in 2015 Polish HEIs (representing over 66% university-type HEIs) out of 84.3% confirmed that their IQA systems have reached the stage of formal implementation. The remaining 9.7% declare that they have a number of unrelated procedures which do not yet form a system and 4.9% have only a single procedure (e.g. a programme review) or tool (e.g. student evaluation survey). The "other" answers showed that implementation of IQAs or their procedure is in progress. In most of the cases (56.3%) IQAs were established between 2006 and 2011 and were prompted by national requirements which came into force in 2007.

On basis of survey results one can also observe the further intensive development (29%) of formal IQA systems between 2012 and 2014, which was mainly caused by legislative changes at the same time. Besides, the Polish Accreditation Committee began to assess its internal quality assurance system within the institutional evaluation framework. In 97.8% of cases the IQA systems cover teaching and learning activity while research and governance is covered only in 40.7% and 44 % of responses. A great number of HEIs (25) also decided to skip the question. It showed the common practice among HEIs that research and governance are not usually included in the IQA systems. More than half of responding HEIs confirmed that internal quality assurance system covers all units (faculties, departments etc.). At the same time 37% of respondents declared that the progress varies to some extent among different units only in 3 cases it varies considerably. In open-end question 1 HEI pointed out that difference among 24 HEIs skipped the question which might indicate that awareness on the stage of implementation of internal quality assurance systems is rather low or difficult to interpret. The majority of the HEIs (40%) use the current version of ESG as broad guidelines for selected elements of the internal quality assurance system. The rest of the HEIs use the ESG as an indicative checklist to ensure broad compliance with the ESG (23,5%), or they have integrated the ESG into their own standards and guidelines (12,9%).

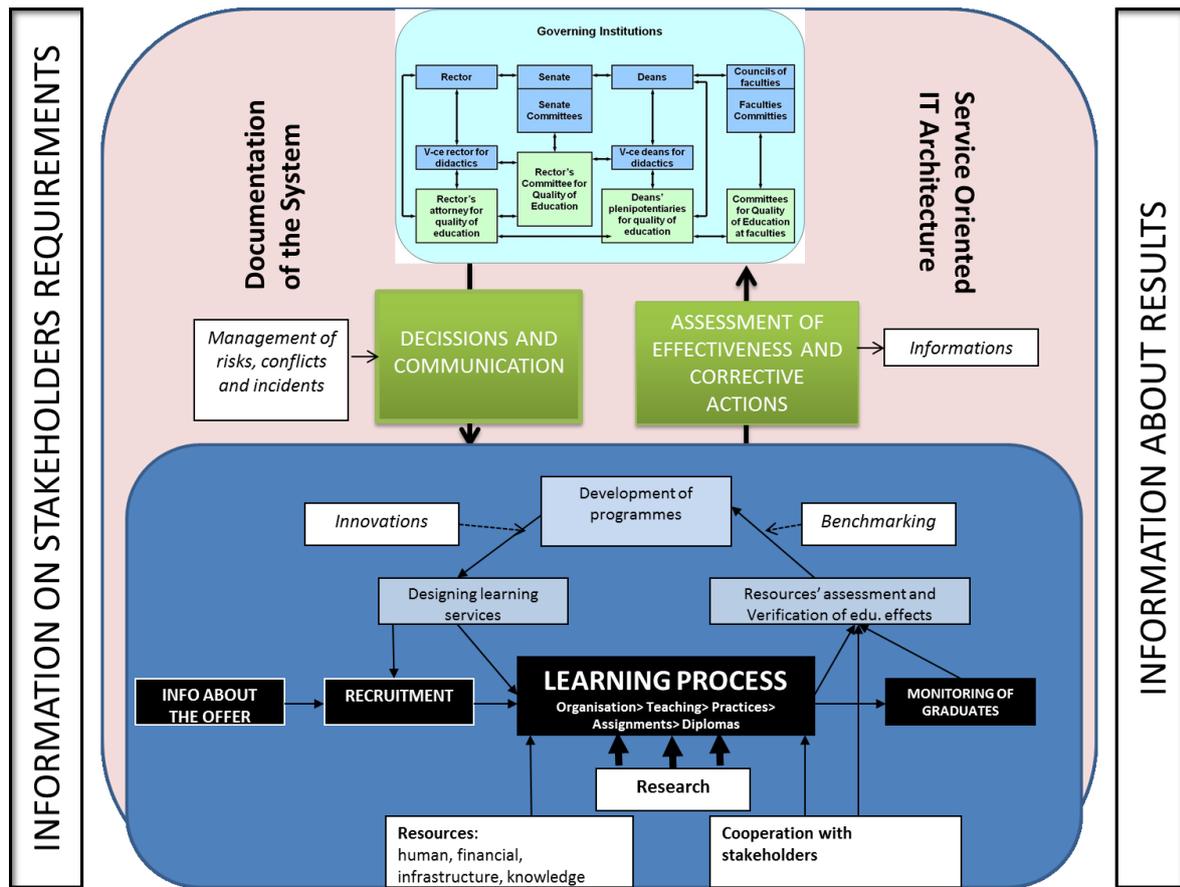
At present, the majority of HEIs declare that they operate internal quality assurance systems. The development of those systems and their effectiveness is monitored on an ongoing basis and evaluated by the Polish Accreditation Committee - the sole legal body responsible for quality assurance in higher education. The Polish Accreditation Committee performs its mission by conducting obligatory programme and institutional evaluations of education quality and by giving opinions on applications submitted by higher education institutions for the authorisation to provide degree programmes. The Committee strives to ensure that its opinions and

evaluations leave ample room for autonomous initiatives promoting innovativeness in the teaching process and education quality culture.

A great deal of experience in aspects of risk management already exists within many HEI. Such expertise are however not always evidenced and spread. The bottom up approach to risk management has been applied to the IQA of Warsaw University of Life Sciences (WULS-SGGW) accordingly with the development of the system in 2013 [Maciejczak et al. 2013].

This is the oldest agricultural university in Poland and its history dates back to 1816. Mission of the University is to provide society with knowledge and education characterized by multidisciplinary and internationality in the wide area of environmentally oriented sustainable development. The University offers wide-ranging programs of study - from biological and technical, through medical, economics and humanities. WULS enrolls over 27,000 full time students. WULS-SGGW offers 38 study programmes and wide range of specializations within them. The teaching staff is over 1,100 academics, including 250 full professors. Research and education is carried out at 13 faculties, one MBA program in agribusiness management and several experiment stations through Poland. Academic programs are offered at the bachelor, master and doctoral levels, what contributes to improving comparability of studies and transparency at the international level too. The university has been recognized among others as "Start-ups Friendly University", "The most innovative and creative university in Poland" and "Friendly university for students." The WULS-SGGW implemented process based and effects (results) oriented internal quality assurance system (see Figure 1) which is positively assessed and accredited by Polish Accreditation Committee and other sectoral accreditation agencies, i.e. The European Association of Establishments for Veterinary Education.

Today the system is working on two levels, first is the university and second, assumed as a main level, is the faculty. The university level is focusing on constituting the general framework, equal for all faculties. Its main procedure names 25 basic processes, that should be in details described by the systems of particular faculties. This is due to the fact that Warsaw University of Life Sciences – SGGW consists of 13 faculties in broad range of life sciences, from biotechnology, through animal sciences, plant sciences, forestry and wood technology, to social sciences. Such diversity of fields as well as particular requirements concerning the education constituted the need for elasticity. The system should be accordingly comprehensive. Thus, at the faculty's level these 25 basic processes is in details described according to the specific of each faculty. Each faculty designs also the mechanisms of monitoring and development. The results of those mechanisms are taken into consideration by the university's monitoring and development activities.



**Figure 1. System of Ensuring and Development of Quality of Education in WULS-SGGW.**

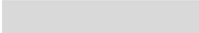
Source: Resolution of the Senate no. 1-2013/2014 on the System of Assurance and Development of Quality of Education in WULS-SGGW.

Having in mind that the diffusion of innovation such risk management requires time, in which the stakeholders will develop appropriate knowledge and skills and will be able to successfully and effectively utilize the change, the project of implementation the risk approach into IQA was spread over the years 2013-2016. The plan aims firstly to develop knowledge, skills and tools that secondly will enable the stakeholders to manage the risk associated with the quality assurance of the university. In the academic year 2013/2014 the staff trainings took place and the tool for risk analysis was selected from the set of methods used in other sectors.

The stakeholders decided to use of the Hazard And Operability Study (HAZOP) method modified according to the needs of the university. HAZOP is a structured and systematic examination of a planned or existing process or operation in order to identify and evaluate problems that may represent risks to different areas and levels of the organization. HAZOP is used as part of a quantitative risk assessment. It investigates how the system deviates from the design intent and create risk for personnel and equipment and operability problems. If, in the process of identifying problems during a HAZOP study, a solution becomes apparent, it is recorded as part of the HAZOP result. However, it is advised that care must be taken to avoid trying to find solutions which are not so apparent, because the prime objective for the HAZOP is problem identification. HAZOP is based on the principle that several experts with different backgrounds can interact and identify more problems when working together than when working separately and combining their results [Crawley and Tyler 2015].

**Table 1. Risk assessment for IQA of WULS-SGGW in the academic year 2014/2015**

Faculty	Programs	Modules	Learning effects	Cooperation with stakeholders	Graduates professional career tracking	Internationalization	Transfer and recognition	Personnel policy	Teaching Staff	Scientific excellence	Material resources	Students support	Information system	Access to information	Ethical standards	Self-improvement
FofFS																
FofSS																
FofES																
FofHBLA																
FofAB																
FofWT																
FofAS																
FofPE																
FofHNCS																
FofF																
FofVM																
FofCEE																
FofAIM																
WULS																

 High risk
  Medium risk
  Low risk

Sources: own elaboration

The table 1 presents the risk assessment for SGGW - WULS quality assurance. For WULS there were selected 16 horizontal areas in which quantitative and qualitative assessment should be made. In the academic year 2014/2015 the first risk analysis was performed at the faculties level and as result at the university level. The results show that overallly the risk has been identified as high in 2,5% of activities, 44% as medium and 53,5 as low. The academic year 2015/2016 is devoted to learn the lessons how to use the generated knowledge in an effective way, the appropriate corrective actions, if necessary, will be also taken. It aims also to focus on effective communication.

The applied model of risk management within IQA of WULS bases on the process, which is formed of a set of co-ordinated, and standard in many methodologies for risk management, activities:

1. Define goals,
2. Recognize risks,
3. Evaluate of risks,
4. Respond to significant risks by:
  - a. Tolerate
  - b. Treat
  - c. Transfer
  - d. Terminate
  - e. Control resource
  - f. Reaction planning
5. Communication,

6. Report and monitor risk performance,
7. Review risk management.

The applied method of introducing risk management in IQA of WULS resulted in two main benefits. First benefit is associated with the resistance to change. On the wave of significant structural changes of IQA the introduction of risk management has not been rejected as another bureaucratic fiction, but accepted as “something that might be useful”. The second benefit is associated with the applied method, which was selected, modified and tested by the conscious stakeholders, through the trust to used method has been assured. As the implementation process is not finalized, and the full cycle of the innovation has not been maintained yet, it is impossible to assess how much the bottom up approach in case of WULS IQS’ risk management will be successful in being the driving force to develop the university’s quality culture. However the preliminary results are promising.

### **Conclusions**

It should be stressed out that a wide range of experiences in different aspects of risk management already exist in the higher education sector. HEI have a different objectives and governance standards other to the commercial companies, however they might follow the risk management approaches based on identified business practices and through increase the maturity of their IQA processes. It is argued that the more the approach to risk is IQA of HEI is bottom up based the more benefits of introduced innovation could be reached. The top down approach of introduction of risk management through the regulatory regime to HEI practices requires the transitional period in which the diffusion of innovations will take place passing of the stages of communication and implementation such as awareness, interest, evaluation, trial and adaptation. In general the most important message coming from the analysis is that a core issue in HEI management is to identify risk management as an important measure for development with the appropriate awareness of the university’s community, and not as next bureaucratic senseless activity. Also the research agendas should take into account this issue, especially in order to show effectiveness and usefulness of this concept as well as costs associated with its implementation and diffusion.

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