

# GOVERN

FOSTERING AUTONOMY AND ACCOUNTABILITY: DEVELOPMENT OF STATE-OF-THE-ART HE  
MANAGEMENT SYSTEM FOR EFFICIENT CHANGES IN LINE WITH BOLOGNA PRINCIPLES

## FOSTERING AUTONOMY AND ACCOUNTABILITY: DEVELOPMENT OF STATE-OF-THE-ART HIGHER EDUCATION MANAGEMENT SYSTEMS FOR EFFICIENT CHANGES IN LINE WITH BOLOGNA PRINCIPLES

### TRAINING KIT

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## FOREWORD

Dear Colleagues,

Fostering Autonomy and Accountability: Development of State-of-the-art HE Management System for Efficient Changes in Line with Bologna Principles, is a four-year project (2013-2017) made possible through generous contribution of the European Commission to the HE system development in Armenia through its Tempus initiative. For the last four years, State Academy of Fine Arts of Armenia was honored to coordinate the project driven by the notion of enhancing the capacity of Armenian higher education institutions to effectively run their managerial errands - in line with the Bologna Principles.



The highlight of the project is the revised management system for HE, which aims to guide the stakeholders in their efforts to enhance autonomy and accountability of HEIs in Armenia. It also endeavors to share the experience to employ quality assurance mechanisms leading to relevance and efficiency of HE provisions. It encourages policy-makers and stakeholders in higher education to further develop the experience exchange and learning culture to enable the necessary transformations in a post-soviet higher education context. The project achievement would not have been possible without the invaluable support and help of institutions and colleagues involved in the project consortium. We would like to extend our sincere thanks to all of them for their valuable inputs, wise guidance, whole-hearted cooperation and constructive criticism throughout the project life-time.

I would also like to take this opportunity and convey my sincere gratitude to the European Commission and particularly the EACEA for the opportunity to make this project happen. The assistance provided by the teams from EACEA have been fundamental for effective management and implementation of our project.

I do hope the experience we gained is useful for our peers and stakeholders and brings about sustainable development of HEIs in Armenia and beyond.

**Prof. Dr. Aram ISABEKYAN**  
**SAAFA Rector**



## Dear Colleagues,

GOVERN is a joint endeavor of thought leaders in the Armenian and European Union higher education to move higher education reform agenda in a post-Soviet context to a new level of performance in line with the international trends and accepted standards. As a guide the team used the principles outlined in the Bologna Declaration aimed to establish a gateway for Armenia into the European Higher Education Area (EHEA) and the European Research Area (ERA) – the two pillars of the knowledge-based society.



GOVERN is an endeavor to revise approaches to governance and administration, academic processes management, managing student affairs – all aimed at promoting efficiency and relevance in HEI operations. Throughout the four years of project implementation, with joint efforts of both Armenian and European partners, a major capacity building of the different levels of HEI management took place to enable Bologna action lines implementation. Along with capacity building an in-depth analysis of the current legal system was undertaken based on which a set of recommendations on the revision of the Armenian national legal system was presented to the Ministry. Accordingly, the regulatory frameworks of the HEIs have been revised to enable full operationalization of the Bologna principles. Another major achievement is an innovative approach to HEI management system - strategic and structural management, budget allocation, and human resource management among other things. Last, but not least, new approaches to managing academic programs, the office of academic affairs and the registrar have been developed and integrated into daily operations of the HEIs. The current training kit is the contribution of the GOVERN consortium and is addressed to the academic community to guide them in the reforms and revision of the HEI management system. It reflects the results of the capacity building activities on university strategic, academic affairs, financial and human resource management bringing in the case studies of the Armenian HEIs and good practices of the European partners. We do hope it will be useful for the HE stakeholders in their revision of approaches to HE governance, management and administration promulgated by the Armenian Government. We hope it has a wider impact and contributes to the sustainable development of HE system in the country.

We extend our highest possible appreciation to the European Commission and its Education, Audiovisual and Culture Executive Agency, to the National Erasmus+ Office, to the Ministry of Education and Science of Armenia, to the National Center for Professional Education Quality Assurance and to all the European partners for their invaluable input in the achievement of the project specific objectives and for the invaluable contribution to the system sustainable development. Special gratitude is to our external EU expert, Heinz Ulrich-Schmidt, for his wise guidance in the revision of the Armenian legal framework and contribution to the overall project.

**Susanna KARAKHANYAN, PhD**  
**Project Author and Coordinator**

## I. INFORMATION ABOUT THE PROJECT

GOVERN (FOSTERING AUTONOMY AND ACCOUNTABILITY: DEVELOPMENT OF STATE-OF-THE-ART HEI MANAGEMENT SYSTEM FOR EFFICIENT CHANGES IN LINE WITH BOLOGNA PRINCIPLES) is a three-year national project, under the priority of Governance Reform, EACEA N° 35/2012, 6th call and Structural Measures action.

The wider objective of the project is to enable application of the state-of-the-art management system at Armenian HEIs for promoting effective and efficient structural changes in line with Bologna agenda, thus enhancing HEIs autonomy and accountability.

The specific objectives target enhancement of autonomy and accountability of HEIs through:

- building on the capacity of administrative staff for managing system changes efficiently;
- revising the legal (system level) and regulatory (HEI level) frameworks in line with Bologna action lines;
- establishing the state-of-the-art university management system through overhaul of approaches to system changes: strategic, financial and human resource management
- introducing working approaches to student-centered educational provisions: ECTS and academic programme management to assure quality and promote student mobility.

The principle outcomes/outputs include, but are not limited to:

- Building on capacity of top and middle level administration to enable Bologna action lines implementation;
- Developing/revising new/existing legal (system-wide) and regulatory (HEIs) frameworks in line with Bologna lines;
- Proposing a model for a state-of-the-art management system based on new approaches to strategic and structural management, budget allocation, human resource management;
- Developing and operationalizing indicators and criteria for academic programme and student mobility;
- Developing and embedding new approaches to managing academic programmes and office of academic affairs and registrar (installation of student portal and student affairs information management system).

The HEIs are from a single CIS country – Armenia. This allows deeper understanding of the needs of developing systems and customization to specific country and institutions priorities.

The current training kit targets capacity building of administrative and managerial staff responsible for different aspects of HEI and programme management and administration for the systems in transition. It is a result of a series of trainings and workshops developed for the specific purpose. It is the aim of the project to make this training kit available for broader use beyond the project consortium and after its life-time.



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## ACKNOWLEDGEMENTS

*This training kit is the contribution of the TEMPUS GOVERN Project coordinated by the State Academy of Fine Arts of Armenia. The GOVERN Management Team extends its gratitude to the team of the European partners who have made this training kit possible*

- *World University Service (WUS) Austria – lead partner for the activity;*
- *Leuven University College (Belgium);*
- *CESIE (Italy);*
- *Bath Spa University (the United Kingdom);*
- *Heinz-Ulrich Schmidt, an ENQA expert, former Director General for HE (Science) and Research of Brandenburg Ministry of Higher Education (Science), Research and Cultural Affairs.*

*Special thanks also go to the Armenian partner, American University of Armenia, for the major contribution to this capacity building tool through sharing their good practice.*

## II. UNIVERSITY STRATEGIC MANAGEMENT, MANAGEMENT OF ACADEMIC AFFAIRS, HUMAN RESOURCE MANAGEMENT AND FINANCIAL MANAGEMENT AT HIGHER EDUCATION INSTITUTIONS

The following chapters include detailed information to the presentations that were held during trainings and workshop throughout the first year of the project life-time- 2014 - within the Tempus project GOVERN. The short papers to each sub-chapter provide basic information and potential sources of information and concentrate on providing points of further discussion as well as practical instruments/measures for three key target groups in the HEI management and administration - top, medium and program level administrative staff members - to guide them in their day-to-day management of HEIs and programmes. A) University Strategic Management  
 A) University Strategic Management

### VISION, STRATEGY AND KEY PERFORMANCE INDICATORS

*Author: xxx; contact: xxx*

This chapter has been designed to support Armenian HEIs engaged in the TEMPUS GOVERN project to revise their curricula in line with Bologna Guidelines. This handbook provides:

1. a template to enable you to develop and revise all existing programmes in your institution
2. guidance to ensure that the revised programmes will be developed in line with ECTS systems, legal and regulatory frameworks and guidelines on student-centred education.

This chapter has been designed to be used in conjunction with the other materials that have been developed to support strategic management at universities in Armenia. The chapter is structured to move you from the 'big picture' of the vision for your HEI through to the detailed design of a module descriptor. Examples are provided to illustrate certain points and to stimulate your thinking; they are not intended to be guidelines to copy.

#### **Vision and strategy**

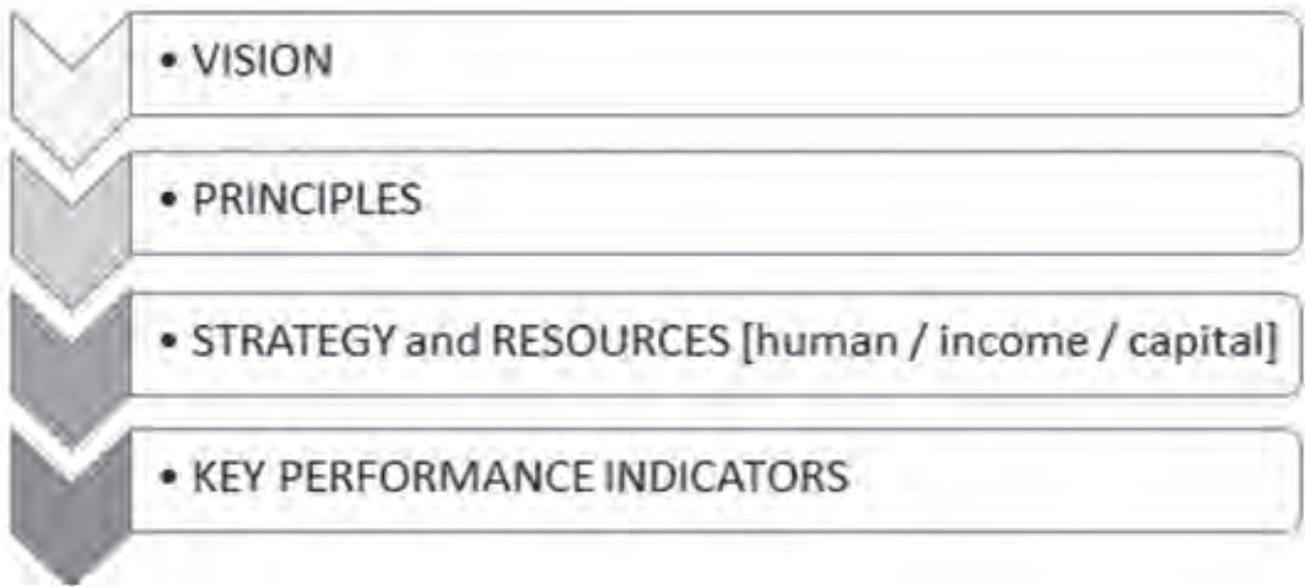
Universities, wherever they are in the world, face a number of external and internal challenges. These need to be acknowledged and used to inform the strategic direction of the university.

The **vision** of the university identifies key **principles** that inform all decisions. The principles are realised through **strategies** and resources are allocated to ensure that they are realised. These resources include human resources (both professional and academic staff), income and capital resources. Strategies are monitored and evaluated through the identification of **key performance indicators**.

This process is illustrated in Figure 1 below:



## Leadership: Vision , Principles and Strategy



*Figure 1:* The relationship between vision, principles, strategy and key performance indicators. The process by which vision is realised and expressed in key performance indicators is a leadership issue. Whilst this is led by senior managers it is important that staff and student representatives are engaged in this process.

## LEADERSHIP IS ABOUT

- Making sure money is linked to your strategy and the budget is linked to your Key Performance Indicators (KPIs)
- Knowing that what gets measured gets done
- Deciding what you will start doing means you have to decide what you will STOP doing.
- Expressing your vision in a clear message, keeping it simple and keep saying it.
- Building relationships: involving and engaging all stakeholders

An important point to remember: **be realistic!**

“Change the things you can change, don’t try and change the things you can’t change and have the wisdom to know the difference between the two.”

**Case study: Bath Spa University, UK**

The following example (from Bath Spa University, Bath, UK) illustrates this process.

## OUR VISION FOR 2015

To be a leading educational institution in creativity, culture and research. Through innovative teaching and research, the University will provide a high quality student experience.

Based in a world heritage city and connected to a network of international partners, Bath Spa University will ensure that its graduates are socially engaged global citizens.



## PRINCIPLES



- The student experience is internationalised and socially engaged
- We are academically led
- We behave ethically

The vision and the principles have led to three strategies based on:

- Enriching the student experience
- Developing the research undertaken at the university and ensuring that it has impact
- Building on the international links that the university has and increasing the number of international students.



## STRATEGIES



These strategies were then articulated as seven Key Performance Indicators which are:

1. Increasing the “overall satisfaction” of students at Bath Spa University as measured in the UK National Student Survey (NSS).
2. Setting targets for research income of £5000 per full time equivalent (FTE) member of staff
3. Graduate employment
4. Graduate completion rates
5. Increasing the number of Postgraduate students studying for Masters and PhDs
6. Increasing the number of international students
7. Decreasing the staff student ratio.

Table 1 below presents the KPI targets and shows how progress towards meeting the targets is monitored over a period of time.

KPI	National Student Survey Overall Satisfaction	Research Income /FTE	Graduate Employment	Completion Rate	% Postgraduate Higher Degrees	% International	Staff-Student Ratio
KPI target	86%	£5k	65%	91%	15%	15%	17.3
Current position	87	2.3	61.2	91.8	6.5	4.3	20.0
March 2013	83	1.8	59.2	91.3	6	3.1	21.8
March 2012	84	1.5	60.8	92.4	4.1	3.2	21.6
Change 2012 - 2014	3	0.8	0.4	-0.4	2.4	1.1	1.6
Projected for 2013-14 <sup>1</sup>					8.1	11.5	
Current data	12-13	12-13	11-12	12-13	12-13	12-13	12-13

Table 1 Monitoring of KPIs

## The consultation process

The process of articulating the vision, strategy and deciding on the KPIs was lead by the Vice Chancellor and the senior leaders at the university. The vision and strategies were drafted by the senior team prior to consultation with staff abd student representatives.

The vision and strategy is currently (December 2014) being evaluated and shaped for 2020. The consultation process is based around a number of meetings that are open to all staff. At these meetings the external and internal factors that are impacting upon the university are outlined and in the light of these changes and the progress that has been made with the KPIs . All staff are invited to comment and suggest how the vision could be adapted for the next five years.

The leadership community (comprising leaders within the professional and academic staff) then met to discuss how best to operationalise the new strategy, and provide an opportunity to further develop the emerging strategy. This event was organised in two sections. The first part of the day was spent looking back at how strategy had been operationalised in the past. Leaders were able to share good practice as to how they achieved the delivery of strategic goals in the past. The second part of the session looked forward to the new emerging strategy for 2020 and gave an opportunity to consider the impact of the new strategy on each School or Department in more detail.

### **Theme: Programme strategy and objectives 1**

#### **Rationale and objectives.**

Before thinking about the content of an existing or new academic programme it is important to consider the rationale for offering this course, whether it is at undergraduate (BA, BSc) or post-graduate level (MA, MSc).

<b>Current position</b>	<b>Future developments</b>
What are the reasons for offering this programme?	What other reasons could there be?
Why and how does the university argue for offering this programme?	How could this course be of greater benefit the university?
How have stakeholders been involved in the design of this programme?	How could you involve stakeholders more?



**Theme: Programme strategy and objectives 2**

**Competition and employability**

<p>Competition What other programmes could students choose instead of you course?</p>
<p>What are the Unique Selling Points (USPs) of your course?</p>
<p>What are the employment routes for students that graduate from your course?</p>
<p>How does your programme relate to the job market?</p>
<p>To what extent does the programme fit in with the other courses that you offer?</p>

**Theme: Admission criteria for MA programmes 3**

<p><i>What previous degree do you have to hold?</i></p>	
<p><i>What level of degree should this be?</i></p>	
<p><i>What level of language do you need to have?</i></p>	
<p><i>Are there any pre-requisites prior to starting the course?</i></p>	

## KEY PERFORMANCE INDICATORS OR KEY SUCCESS INDICATORS

### A tool for Higher Education institution development

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#### Introduction

*The quality of higher education has proven to be at the heart of a European Higher Education area.* (Berlin Communiqué, 2003)

In 2003 Quality Assurance (QA) was accepted as a major tool for the development of higher education, as well as a fundamental instrument for standardisation and harmonisation of the European Higher Education Area.

Due to the developments that the Bologna process endured, it was of vital importance to define a common strategy using a similar methodology and principles. QA was identified as the most practical tool that should be used at academic institutions.

A higher education institution in a newly formed global higher education environment should be:

- more **process** orientated;
- more **customer** orientated;
- more **competitive**.

In the new business environment, a higher education institution ought to start applying the QA procedures. This should be done by means of 1) constructing the European Standard and guidelines, 2) generating new processes, 3) developing the QA culture at home institution, 4) involving students, faculty members, management and administration in institutional processes, and 5) promoting QA at the home institution.

"In the decade up to 2020 European higher education has a vital contribution to make in realising a Europe of knowledge that is highly creative and innovative... Europe can only succeed in this endeavour if it maximises the talents and capacities of all its citizens and fully engages in lifelong learning as well as in widening participation in higher education." . Leuven/Louvain-la-Neuve Communiqué, April 2009

Procedures, standards and guidelines developed for QA in higher education are often compared to the ISO standards, and in real-world exertion they could indeed be perceived as a comparable version to the ISO standard since the philosophy behind the QA is quite similar.

This approach is a common QA cultural approach and could be titled: "How to achieve excellence and measure the improvements?"

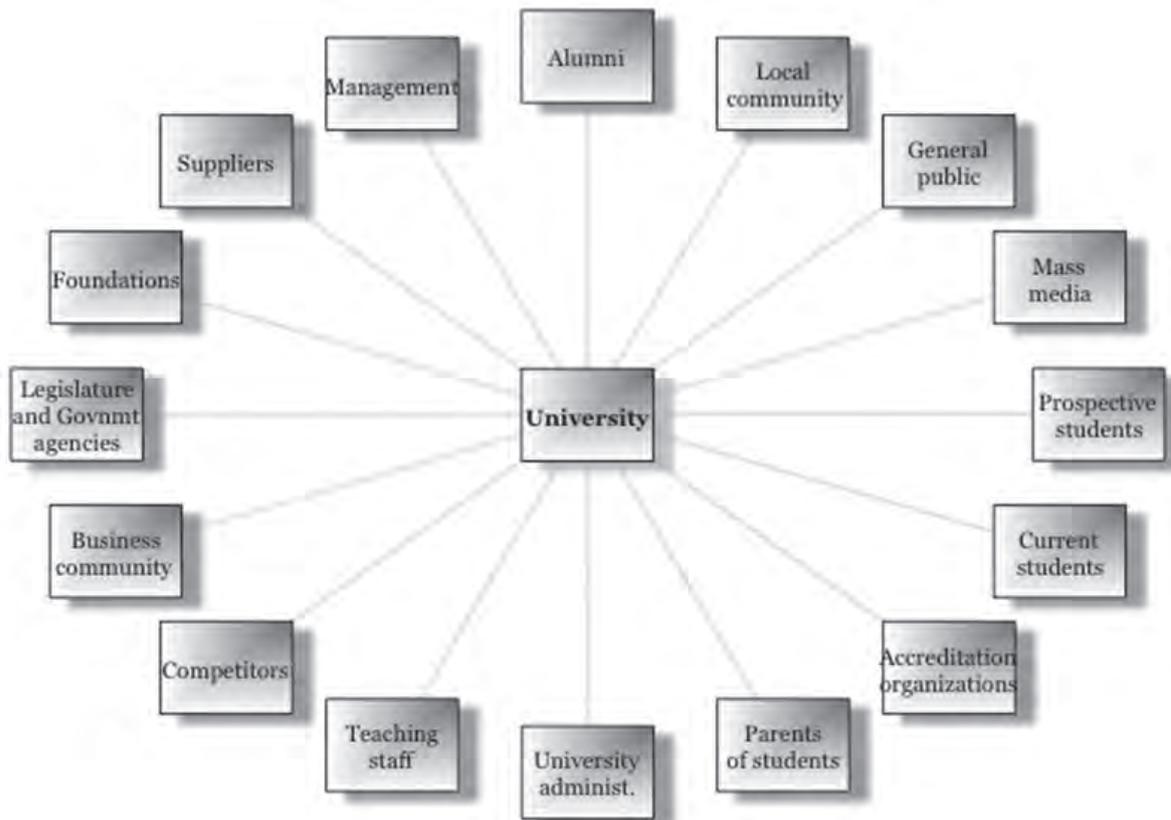
Nevertheless, this approach cannot be implemented without an additional instrument for the measurement of quality. Key Performance Indicators (KPI) is a compulsory tool for a successful performance of the entire development process.

Each higher education institution must organise its internal QA processes which fit its own vision and mission, and are aligned with its values, taking into account that internal assessments must be consistent with the needs and external accountability as foreseen in its national and/or international context.



Higher education institutions can no longer simply express their commitments to excellence; they must actively monitor their activities, improve their offerings and demonstrate their quality to a variety of stakeholders.

### The university and its publics



### Objectives of Key Performance Indicators

Key Performance Indicators or Key Success Indicators, is a high-level performance metric that is used to simplify complex information and point to the general state of a phenomenon, created to support an organisation in order to define and measure progress toward organisational goals.

Initially, a higher education institution may commence with a minimum number of measurable indicators with a clear index per item. It is important to maintain the number of Key Performance Indicators at a realistic level and to keep everyone's attention focused on achieving the same indicators. Key Performance Indicators must be quantifiable and selected in accordance with the university's clearly defined objectives and existing capacities.

## List of potential indicators

The following table presents provisional examples of possible indicators each higher education institution can use in accordance with its own strategy and goals.

Management	Education
Indexes of financial resources (total budget, students fees, research projects (domestics) EU projects, donation) on the basis of current and previous year	Percentage of students successfully finished the first year of the first circle
Realization of strategic plan (% of realization annually)	Percentage of graduates per each generation
Total budget per employers and total budget per students	The application/admission ratio
Visibility of main strategic documents (web, other media, public presentation)	Percentage of external experts engaged in the teaching process
Research	Funding / Finance
Number of publications published in the relevant databases	Total budget/ number of students
Number of citations	Own incomes/ total budget
The percent of research innovation funding in total university budget	Income from economy
Number of international research projects	Income from EU project
Number of students included into research projects	Income from students' fees
Number of finished doctoral thesis on the yearly basis	Income from research projects
Cooperation with society	Total budget/number of graduated
Number of realized lifelong learning courses	Internacionalisation
Number of master/doctoral thesis realized in cooperation with society on the yearly basis	Number of teaching mobility
Internacionalisation	Number of student mobility
• Number of teaching mobility	Number of courses given in foreign language
• Number of student mobility	Human resource
• Number of courses given in foreign language	Workload: Number of classes per week (calculated for each lecturer):
Student service	Average workload
Special services (access)	Maximum workload
Number of alumni club members per year activities	Minimum workload
Internet access points per student	Number of mentorship candidates/ number of lecturers
Student/academic staff ratio	
Number of students /number of lecturers (calculated for each program, even separately for each study year, because 1 <sup>st</sup> year is often with higher number of students)	
Minimum student/staff ratio administrative and technical staff	
Number of staff/academic title	
Number of staff for each gender/ academic title	

The entire philosophy of the QA process should be directed and redirected in the frame of future development and continual monitoring and evaluation of ongoing processes and measured by clear defined criteria and indicator. In the 1950's W. Edwards Deming proposed that business processes should be analysed and measured to identify sources of variations that cause products to deviate from customer requirements. He recommended that business processes be placed in a continuous feedback loop so that managers can identify and change the parts of the process that need improvements.



## RESULT BASED BUDGETING IN UNIVERSITIES

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Result Based Budgeting (RBB) is an integral part of Result Based Management (RBM). It is a strategic management and planning tool that helps achieving results with effective usage of resources. As a results-oriented performance measurement instrument RBB enables universities to address the issue of qualitative performance measurement.

There are several definitions of RBM and RBB. The widely used and more descriptive are the ones that were proposed by the United Nations:

**RBM** is a participatory and team-based management approach to program planning that focuses on performance and achieving results and impacts. It is designed to improve program delivery and strengthen management effectiveness, efficiency and accountability.<sup>1</sup>

Results-based budgeting (**RBB**) is a budget process in which

- (a) organizations formulate budgets around a set of pre-defined objectives and expected accomplishments, and
- (b) expected accomplishments justify the resource requirements which are derived from and linked to outputs required to achieve such accomplishments, and
- (c) actual performance in achieving expected accomplishments is measured by indicators of achievement. <sup>2</sup>

In the process of program budgeting, performance is measured in terms of expenditure against line items, as a result delivering only quantitative assessment of outputs, while the quality of performance is not measured. This will improve the efficiency and quality control. The logic of the RBB is creating a monitoring and evaluation system that is more focused on the results achieved compared to the quantity of expenditures.

Goals of Result Based Budgeting are:

- To measure performance in order to show whether the activities of the Organization actually make a difference.
- To establish a top-down, logical framework, using a number of strictly defined concepts, such as objectives, expected results, performance indicators and outputs.
- To use the program budget as a direct link between expected accomplishments and resource requirements.
- To become a management and planning tool, rather than another budgeting methodology by mapping the expected results in advance and continuously tracking them.
- To focus on the question of “why performance was below expectations” and enable managers to detect deficiencies (rather than be a simple cost-cutting tool).<sup>3</sup>

### Development of budgeting methodologies

Changes and development in budgeting methodologies starts from so called Expenditure Budgeting Methodology (measuring inputs, resources) that transfers to Program Budgeting, where input focus was changed to program focus. Later this was changed to a methodology that

focuses on resources aided by auditing and evaluation process. During the mid 90s, based on social and political developments urging structural changes, the growing competitiveness, globalization and growing demands for more accountability contributed to the development of Result Based Budgeting.

The development of budgeting methodology may be described as an evolution from the logic of resources to the logic of results.

**Stage one:** focusing on resources

**Stage two:** Making focus on resources aided by auditing and evaluation

**Stage three:** Making focuses on expected results that rationalize the allocation of resources

## **RBB methodology integrates planning, budgeting and measurement functions**

RBB as a management tool links in with other tools which are often already in use in the organization:

- financial auditing, which seeks to determine whether things are being done legally, in conformity with the rules;
- management monitoring and performance auditing, which seek to determine whether things are being done as planned, in accordance with sound management standards, and while limiting risks;
- and evaluation, whose aim is to determine whether the targets are met (results and impacts).

Compared to the RBB the deficiencies of the program budgeting methodology are more specifically:

- ***They do not allow for adequate means of assessing changes or achievements relative to objectives.*** Previous program performance reporting was limited to a review of the status and pattern of output delivery. This was largely a quantitative exercise, showing the implementation rate in terms of outputs programmed, implemented, postponed, terminated etc.
- ***They do not reveal the quality and relevance of the output*** and to what extent the output leads to the achievement the objectives of the medium-term plan.
- ***They primarily focus on short-term management issues,*** with recommendations addressing needs assessment, program design, problem solving, quality of outputs, timeliness, requirements of end-users, etc., rather than achievement of results.
- ***Program objectives,*** reflected in the program budget ***formulated in a virtual vacuum*** since no mechanism is in place to measure to what extent these objectives have been met.

Without a corresponding change in performance monitoring and evaluation of results, rather than outputs, the impact of defining objectives has been practically negligible. Moreover, the shift from input to output budgets has not resulted in reduced input control.

## Budgeting Hierarchy

The following pyramid shows the hierarchy of budgeting in university. Planning starts from the Individual Work Plan and grows to University Strategic Plan and Charter, becoming more concrete from one level down to the next. The RBB commensurate to the work plan is more detailed on the base levels and growing to the overall university budget at the top.

## SMART RBB



Consistency with the organization's overall strategy is a key point for RBB. As Strategic Plan the RBB has to be specific, measurable, achievable, relevant and time-bound.

**Specific:** Expected results must be exact, distinct and clearly stated. Vague language or generalities are not results. They should express the nature of expected changes, the beneficiaries, the region, etc. They should be as detailed as possible without being wordy.

**Measurable:** Expected results must be assessable in some meaningful way, involving qualitative and/or quantitative characteristics.

**Achievable:** They must be realistically achievable using the human, financial and institutional resources available to the Organization.

**Relevant:** They must contribute to the attainment of the strategic objectives and respond to specific and recognized needs or challenges within the Organization's mandate.

**Time-bound:** Expected results must be achievable within a specific timeframe.

## Conclusion

Results Based Budgeting (RBB) is a very effective and useful tool for RBM. It is making possible to take decisions according to a results-based logic, to be transparent and to facilitate the reporting process. It is helpful as long as it focuses more on the aim than on the quantitative results obtained. It is nonetheless also a difficult exercise that takes time to put in place and requires that those concerned should be enabled to acquire additional knowledge.

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1 Results-Based Programming, Management, Monitoring and Reporting (RBM) approach as applied at UNESCO: Guiding Principles<sup>1</sup>

2 UN Guide to RBB (Version 1.1), Office of Programme Planning, Budget and Accounts, 23 October 1998, Glossary.

3 Results based budgeting: objectives, expected results and performance indicators Strasbourg, 25 September 2012

## CREATING A SPECIFIC ADDED VALUE BY ORGANIZING FOR THE STUDENT LIFE CYCLE AND STUDENT EXPERIENCE

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### **ORGANISING FOR THE STUDENT LIFE CYCLE AND STUDENT EXPERIENCE**

If there is one thing that the Bologna process has brought to the fore, except, of course the organisation and its tools of our higher education, it certainly must be the definition of the need that universities should focus on the student and the student's talents. It is a paradigm shift for many institutions to really develop a modern student-centred approach.

In the Leuven-Louvain la Neuve-Bologna Communiqué of 2009 we read the following lines:

*European higher education also faces the major challenge and the ensuing opportunities of globalisation and accelerated technological developments with new providers, new learners and new types of learning. Student-centred learning and mobility will help students develop the competences they need in a changing labour market and will empower them to become active and responsible citizens*

....

*Student-centred learning requires empowering individual learners, new approaches to teaching and learning, effective support and guidance structures and a curriculum focused more clearly on the learner in all three cycles. Curricular reform will thus be an ongoing process leading to high quality, flexible and more individually tailored education paths.*

### **Student life cycle and student experience: initiating a paradigm shift**

There are two main issues to be dealt with, namely that we have to organise for the complete student life cycle on the one hand, and that we have to create an environment and a context in which the talents of the students can optimally addressed. These two issues will be the focus of the article: Student Life Cycle and Student Experience.

Traditionally universities are not really well equipped to build their organisation around a student, to cater for their needs and expectations and help them acquire a number of skills and competencies, based on the specific talents a student brings along to the process. Most HEIs are focused on the creation of knowledge through research and disseminate it by means of their publications. In their teaching they are very much subject and programme-oriented. The student has to undergo all this, he is subjected to an approach in which he is not a central figure. And very often we see that the interaction is more professor-centred than student centred.

It is not easy to create such a paradigm shift. It is not easy to think up and develop a system which starts from the needs, aspirations and talents of the student, in which we have to incorpo-

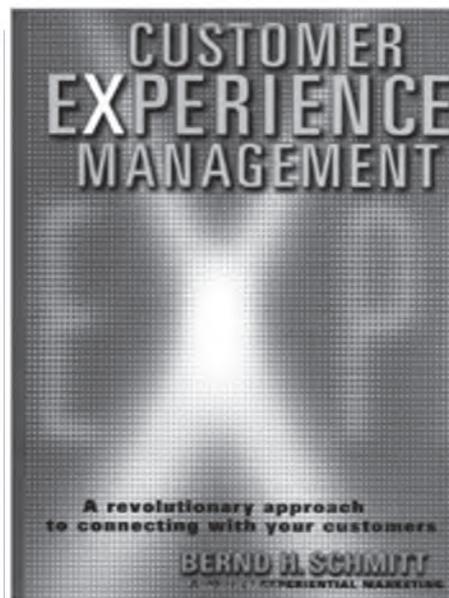
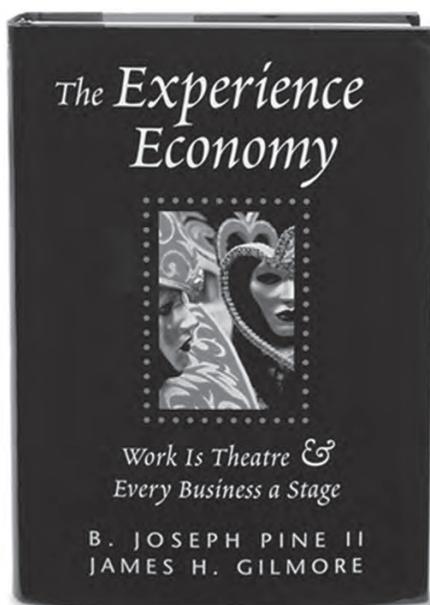
rate everything to ensure employability. At the same time we must look at the other stakeholders and see that their needs are also covered: the work field, society and the world of science.

We have to create the environment and the context in which we can realise these challenges. We have to come up with a relevant curriculum and a mental space in which the student can study, live and work to realise our objectives. We can achieve all this by means of a context and by working on all levels on a comprehensive and well-planned curriculum (overt, hidden, interstitial) covering the whole lifecycle of the student, from the moment he is looking for a place at a university to his life as an alumni. We call this concept 'student experience' .

The student experience encompasses the total life experience of life in higher education, on campus AND beyond. This experience will be present throughout the complete life cycle of the student. It covers all activities and outcomes of these activities both on the individual and subjective level. To complicate it even a bit more, it is very important for the university that we realise that this is a continuously changing thing. We must therefore plan and organise to monitor what is happening and we must be able to make changes fast and according to the changing circumstances.

### ***Experience economy***

We find the concept of experience more and more in all kinds of contexts and activities. Witness are the following books:



It is also a selling argument. People enjoy “experiences”, it creates memories and reputations. It is an added value. Sometimes we see that this added value is THE sales argument.

**Studying is more than just collecting credits and earning a degree, it is a life experience,**



**If you offer a good experience your intrinsic quality is augmented and increased.**

Student experience is based on the complete student life cycle, i.e. from the moment a pupil is considering higher education. Even before he knows about our university, and it will encompass everything from enrolment and induction, to earning credits and receiving a degree, AND his status of alumnus of the university.

Student experience is the metaphor we can use to develop and bring about a meaningful long-term relationship between student and university. An experience is by definition individual and subjective. It is also a collective issue. But we start from the individual student and we build a system round his needs, his talents and his passion and interests.

**What are the elements of the student experience**

*Student's Experience During His Life Cycle*



The entire student experience can be split up into four different types of experience as is shown in the graph above: there is his experience as an applicant, there is the academic experience, there is the campus experience, with a connections to what is going on off campus, in the town where the university is established, and finally there is the graduate experience.

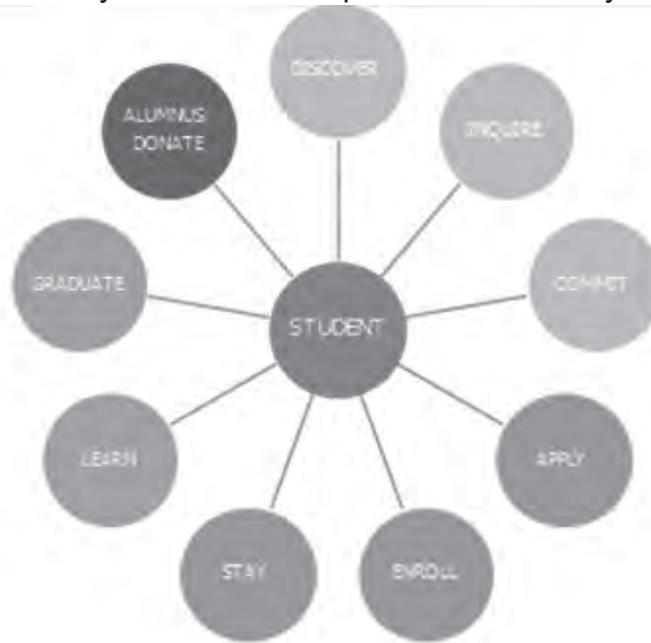
What we see is that the whole student life cycle is incorporated in the model.

A university tends to focus mainly on the academic experience, more specifically on the formal education and learning activities and the student’s participation in the programme, but as can be seen there are so many opportunities in other fields of interest to enhance the comprehensive student experience a lot.

## The student's life cycle from a student's point of view

### LIFE CYCLE: Student's Point of View

If we split up the student life cycle and make a picture of the life cycle from a student's point of view



view we can find 9 distinct phases, and 4 cycle clusters. The clusters start with the student's learning about the university's existence and what happens until he is showing commitment. The following phase is the concrete commitment so the students remains in the programme. Then there is the time spent as a learner and resident. And finally we have the phase after graduation, when the student has become an alumnus.

1. First the student will discover our existence and express interest.
2. He will inquire with us – this is the first contact
3. He will then decide whether he is going to study at our university or not. This should result in a commitment.
4. Next he will go through the whole application procedure.
5. Enrol: he has now become one of our own; here there is also the very important induction phase we have to consider. A good induction means the student will want to stay.
6. Stay: we have to retain the student. This is as a matter of fact a multi-faceted task: the student will only stay if the experience is a good one: good curriculum (both the overt and the hidden), good ambiance and environment, etc. This is taking the student experience we cater for to the test. A lot has to do with the life on campus and beyond.
7. Learn: the specific study and learning process in all its forms and guises, resulting in gaining credits – this focuses on the learning experience itself.
8. Graduate: both the university and the student have reached their goals. The student is given a degree and is now ready to leave campus and enter the professional world and life. We tend not to spend enough attention to this phase.
9. Donate: now the student has become an alumnus, an ambassador for the uni-



**iversity, a valued link in the network chain we need and he may be called upon to help new students**

What does the university have to take into consideration to be equipped for a systematised organisation and upkeep of a student experience model?

A university needs to develop a number of foundations on which to build the student experience model. See the graph below:

### *Foundations For Us to Develop*

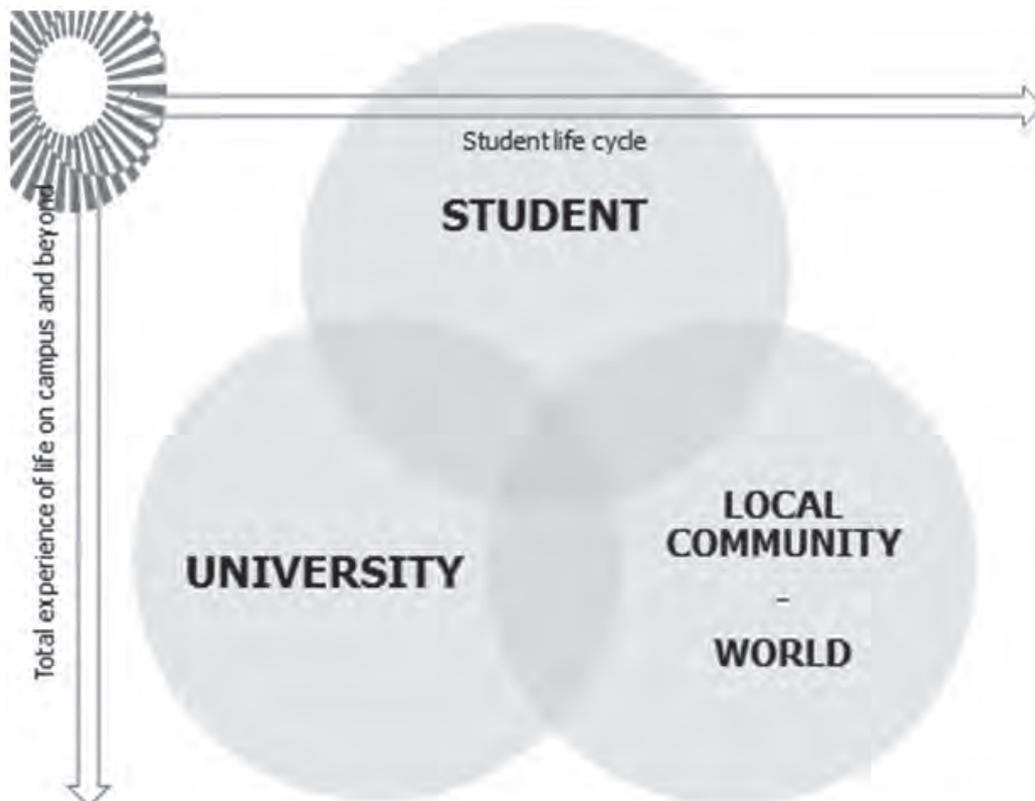


1. Plan and monitor the experience and the commitment of both the institution and the student
2. Academic analytics is the term for business intelligence used in an academic setting. There is an increasing distinction made between academic analytics and traditional Business Intelligence because of the unique type of information that university administrators require for decision making. Business intelligence is the set of techniques and tools for the transformation of raw data into meaningful and useful information for business analysis purposes. Business intelligence technologies are capable of handling large amounts of unstructured data to help identify, develop and otherwise create new strategic business opportunities. The goal of business intelligence is to allow for the easy interpretation of these large volumes of data. Identifying new opportunities and implementing an effective strategy based on insights can provide businesses with a competitive market advantage and long-term stability. You need to gather data and have a system of data-mining.

3. Mobility and portability: this is about earning credits and grade : how does a credit system work, what is accredited and taken along by the student
4. Develop a clear idea what employability means. There are three elements you have to take into account: (1) the graduate must be able to enter the labour market on the beginners level of his degree and be immediately employable. (2) The graduate must be able to maintain his skills and competencies, so as to keep his knowledge and skills up to date. This, in fact, means that the graduate is prepared for lifelong learning. (3) The graduate must be able to take up commitment in helping evolve his place of work and society. This is the element of good citizenship.
5. Individualise and personalise. Organise for student-centered learning, based on the individual and specific talents, needs and aspirations of each student.
6. Community and social commitment. Involve community engagement and social entrepreneurship. The experience will empower the student to take up element (3) of the employability model the university has defined.
7. Curriculum and content. Develop adequate programmes with relevant and effective contents and delivery. Also plan for a hidden or interstitial curriculum besides the overt curriculum. Organise for skills and attitudes such as entrepreneurship, leadership, independence, striving for synergy and interdependence, etc. come to mind. It really depends on how the university will choose to profile.

For examples of academic analytics, data- mining and Business Intelligence, look at the cases “Student retention” and “Management system through data-mining”

***Linking up the actors and stakeholders: Going for Integration***

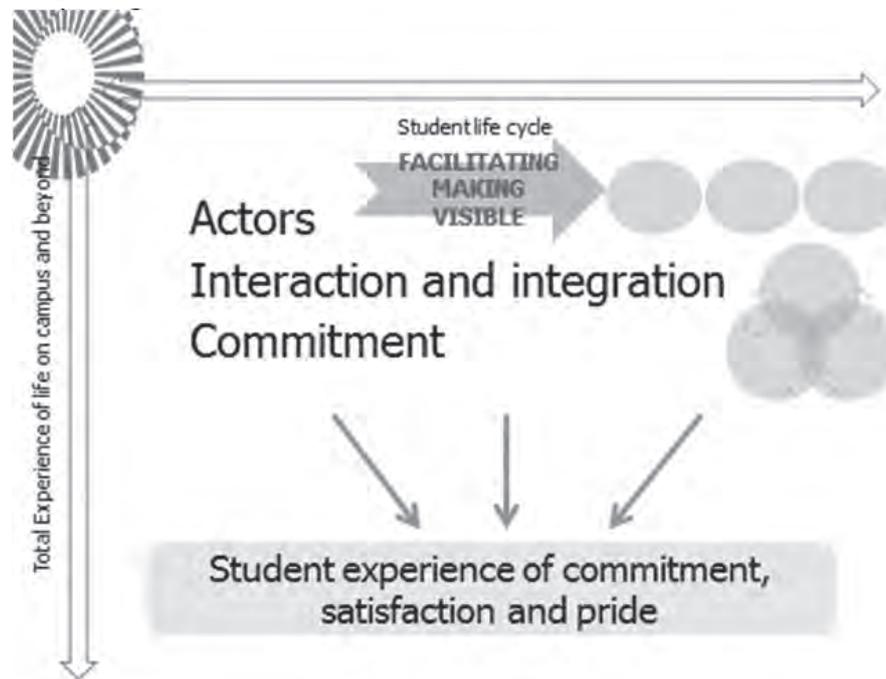




In the following we will see what the building blocks are. The university has to facilitate process and make this interaction and its result clear and visible.

If we can regard our student as a client/stakeholder – not just a consumer client, what we want to achieve is that the student will become a knowledgeable and capable committed person. We also aim to satisfy the aspirations of the student and the other stakeholders of this process. We also want to make the student proud of what he is doing, of what he is doing and where he is acquiring these skills.

The three building blocks of Student Experience are:



1. These actors each participate in the process with their unique characteristics, their own talents, needs, aspirations and expectations: they are part of the experience and HELP REALISE the experience.
2. The dialogue and interaction between the actors, the creation of a COMMUNITY where all actors have their own place and roles to play.
3. The commitment these actors show one another, including their engagement in higher education.

### ***How do we, as a university, enable and empower the actors to do just that?***

Our goal is to realise a student experience in which the student and the other partners are actively involved. And we aim for a framework to generate a living experience created by the actors, and lived by the actors. The student experience must be a positive experience during which the students are proud to be a part of all this, and the fact that they belong to this community.

Many of these elements are already present in the university, even now, but we have to make them visible by showing attention for them, recognizing their importance within this paradigm and also by really showcasing it.

## Stakeholders and actors: the student

Start with the student and consider the elements as shown in the graph.



The first building block; try to facilitate the presence of the actors in their totality. This will start with making visible the presence of the actors and prepare for their induction, e.g. by creating equitable access to and participation in higher education.

Show concern for the social context of the student, the own style of learning and studying, the aspirations and expectations with which he begins his study programme.

Show concern for his specific and general needs regarding life and learning, and try to construct a system built around the talents and the passion of the student. You will train the mind, and reinforce the passion; but remember that the most important task is that you make sure that the student is inspired. You have to create his spirit, so make sure that there is specific inspiration.



## Stakeholders and actors: the university



Of course, the university itself is an important stakeholder/actor in view of the vision and mission the university has defined, the unique character of the institution, etc.

It is of the utmost importance that the three pillars/tasks of higher education (education, research and services) are fully integrated into the student experience.

The academics who are involved in realising the goals of these three tasks are therefore a key factor in the success of the student experience.

Facilities: campus life should be a nice experience because of the environment that is created. It should be student friendly and pleasing.

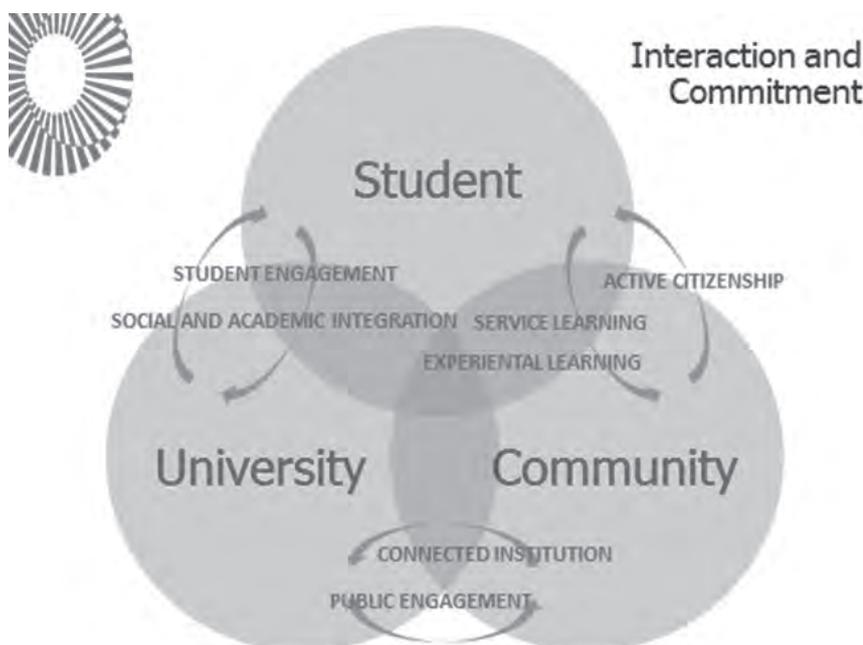
Also pay special attention to your own uniqueness as a university: a university should have a "story" to tell, it should offer a reason for the student to be proud of his Alma Mater.

**Stakeholders and actors: the society/community**



The community is the third pillar. It carries the university and it is the space where the graduate will find a life and a job. In the first instance this is the local community, the region where the university is established. A university that wishes to educate its students to become citizens of the world will also consider the world as the region. So there is the connection between local and global. The stakeholders are also actors in the student experience. It is important to involve them in participative development, participative research and innovation.

**Bringing it together: engagement, commitment and integration**



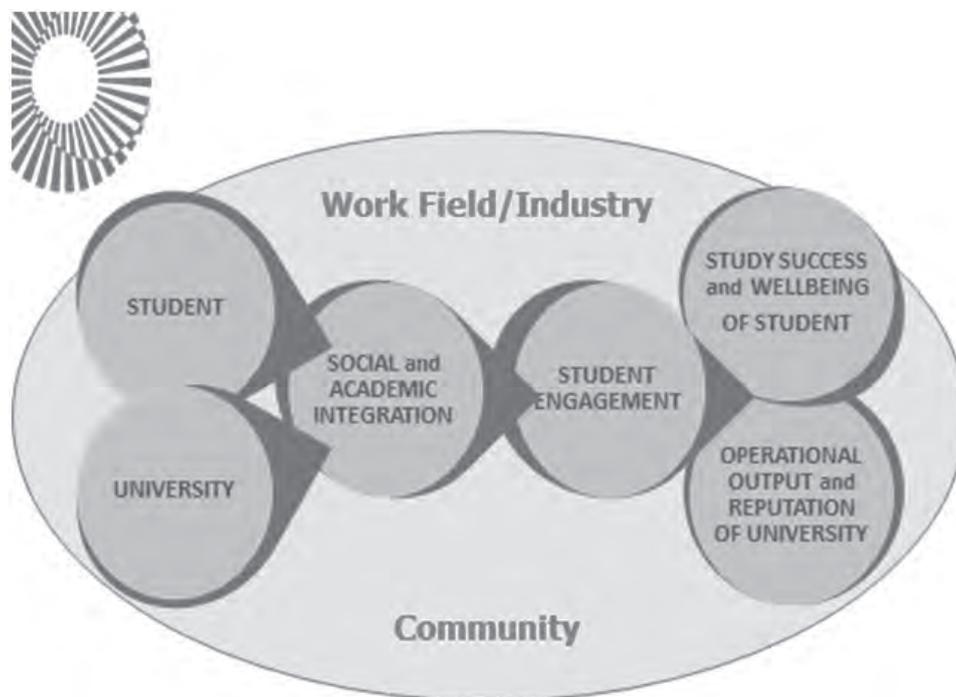


Student experience is further developed by means of the interaction and the commitment that exists between the various partners.

The following topics are discussed in the existing literature:

- student engagement,
- social and academic integration,
- engaged citizenship (active citizenship and citizen of the world),
- connected institution and public engagement. This involves the creation of a positive reputation of the university itself. A university is not only about research and churning out diplomas (the operational output of the university), but also about the standing a university has in a region or country.

These are all issues that may be developed within the concept of Student Experience. The overall picture can be seen in the graph below, depicting the stakeholders/actors and the desired outcomes.



Here the social and academic integration and student engagement are highlighted. The impression exists that these often are put on the same level as Student Experience. Also community and industry have been added because these are external stakeholders and the communication with them is a must. This is done by

- Facilitating the dialogue and the interaction between students themselves,
- between students and faculty (i.e. the social and academic integration)
- between students and community/industry,
- facilitating commitment, engagement, of students with regards to the curriculum as such,
- but also regarding the students in their relationships with one another, with the university and with the region (community/society and industry).

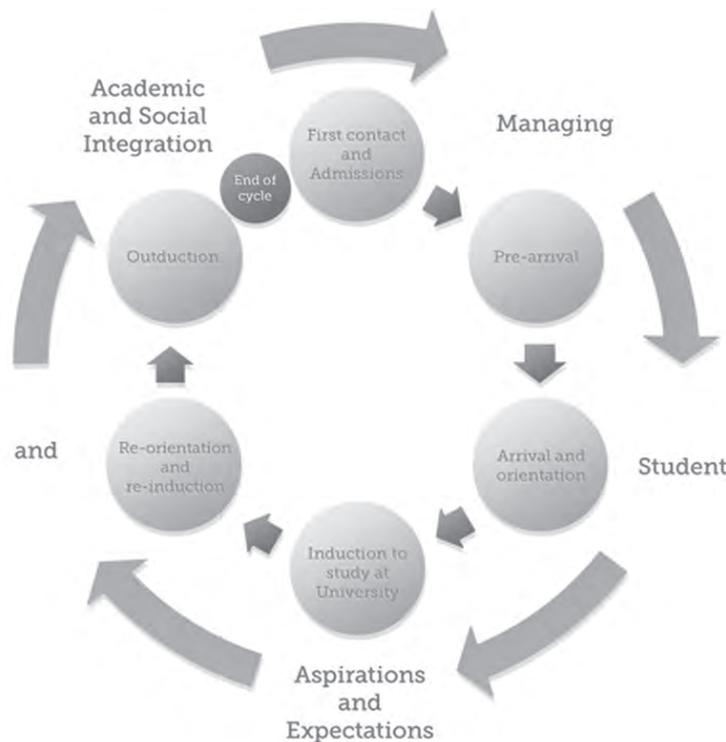
Also important: there is to be a clear commitment of the training programme/curriculum vis a vis the student; but there also should be such a visible commitment regarding the community

and industry.

There is a need to facilitate all this, and it pays to make it tangible and visible, because it is inspiring as an experience and it will foster further growth and development. Also, it will explicitly make student experience discernible, which will contribute to a good reputation.

**Phases of the organisation of the Student Experience model from an institutional point of view, an example: the Morgan model**

The leitmotiv is how to manage the expectations and aspirations of the students while realising social and academic integration.



**Themes in the Student Experience Practikle Model**





## STUDENT RETENTION IN UC LEUVEN-LIMBURG – REGION LEUVEN

Author: xxx; contact: xxx  
(including ANNEXES: Preparing your intake interview and Intro)

The legal situation in Flanders is quite unique, having to deal with a free entree system for higher education from all levels of secondary education, even from the secondary vocational level without entry tests and rather low fees, it is therefore very democratic, but on the other hand it demands a lot of efforts on the part of the institutes of higher education, because drop-out figures are high and success rates in the first year are rather low.

In Leuven we therefore set up a strong system of student support, starting already by co-working with student support in secondary schools in the region. This network is important to support students and tutors during the process of career guidance and strengthening skills and competences necessary for higher education. We make it possible that students during intake, transfer and exit can rely on a solid system of support with regard to all activities in relation to informing, advising and coaching.

The aim is to improve retention, increase success rates, to motivate and challenge students and detect their strengths and talents, to keep an eye on equal opportunities and to increase the well-being of every student.

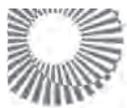
Our supporting system exists of study advising bureaus centralized in every department consisting of PDP-staff (personal development planning), study support, student support, legal support, student administration, ... .

Once a student has entered in our institution he gets his personal PDP, his personal development planner. Our supporting system is built on the PDP-system, which is crucial for the further career-guidance of our students. The focus of this paper will furthermore deal with this subject and not with the other aspects of the support system, because this models the whole of our supporting system.

A PDP is the student's fixed contact person, who will advise, support and coach him or her at pivotal moments during his/her study career. At some moments, contacts are strongly advised and certain interventions are built in, so that students are lead to their PDP without having the feeling that they are forced. We get them on board, by pulling down some barriers e.g. during intake (see next slide) or after the first exams to detect all kind of risks and refer, if necessary, to student support for psycho-social advice or support or to study support if necessary.

A student can always contact his PDP for coaching, for career guidance, counseling, ... . Important to know here is that our PDP 's are not psychologists or specialized people for the job, but lecturers, with a few percentages of their assignment to coach their students. They get a decent training, and we rely on their common sense and empathy and this works for most of them.

The PDP is based on the intake. All of our incoming student get an invitation by mail to fill in



## Personal Development Planning: Intake

- standard questionnaire – based on positive phrasing
- a diagnostic tool to measure skills and motivation (LASSI)
- decent professionalization of PDP
- context of autonomous motivation and self-regulation !

a questionnaire and prepare the intake (see attachment 1 &2). The intake form is based on positive phrasing, not only asking about the previous schooling of the incoming student but also about motivation of choice, hobbies, background, without intruding on the private level, language skills, expectations about programme and support, ... . The data of the intake form are kept in the Data base system (Lime survey), so that we can use them for surveys to keep us informed about our first year incoming students and to continuously improve our supporting system.

Together with the invitation to fill in the questionnaire the students takes the Lassi-test, a test on learning and study strategies, a diagnostic tool, consisting of ten scales measuring skills, self-regulation and motivation of students. (see annexes). It is important to read attachment 3 carefully to understand the aim of the Lassi. The scales of the Lassi cannot be interpreted separately and must not be disconnected from the information a PDP gets from the questionnaire. Therefore the student is invited to prepare his intake carefully (see next slide), but also our PDP is trained to prepare this intake as e.g. how to analyze the results of the Lassi, combine scales and to connect them to certain items from the questionnaire.

The student can certainly learn more about his/her study profile. The Lassi creates a kind of “mirror-effect”, giving the student a decent understanding about the student’s study attitude, study behaviour, level of test strategies, ... and what is most important, it offers an immediate reply to pressing questions and sometimes hidden problems like anxiety, ill-being, as adequate support is offered immediately, because the students are invited within one or two weeks after the first e-mail.

During the intake on the basis of the elements of the questionnaire, the Lassi and the intake itself, the student might be advised to join the interdepartemental study nights, as a kind of step-up, for students in need for some study skills, or students with informational questions about anxiety. Students in need for working-out on study skills, are strongly advised to go to the departemental study support sessions to work on study strategies, planning, testing strategies, ... . Students struggling with ill-being, anxiety, social, psychological or financial problems get adequate support at student support and student services, student with functional disabilities and learning disabilities get adequate support at specialist services ... . For the well-being of some students they might even get an immediate advise for re-orientation on the basis of Lassi and intake-items.

The intake is in the context of our vision of autonomous motivation and self-regulation based on the theory of Ryan and Deci a.o., which we consider of vital importance in our student support. The student takes his study process and development in his own hands with advice and coaching if necessary.



## PDP = WIN-WIN

- support and advice to the best of one's abilities or needs
- interesting data gathering of profiles, beyond the "usual figures"
- finetune support
- focus on the strengths instead of weaknesses
- research about profiles (drop-out vs retention – minority groups, ...)
- start initiatives: support, networking e.g. secondary schools, ...

Our PDP system is a win-win system. It has been evaluated positively both by students and coaches over the years, especially because it is done in an adult, and a safe context. Advice and support is given to the best of the student's abilities and needs, even if the advice in some situations means leaving the institution and making other and better choices for the student's sake.

What is interesting, is that over the years we have gathered lots of data about our first year students, learning more about our students' characteristics: their study profile, their background, previous schooling, choices, skills, motivation, ... making it possible for us to combine these data with Lassi scales, success rates, drop-out, ... .

In this way we were able to continuously improve our supporting system and to share and strengthen our network with our partners, especially the secondary schools and to share the information with your institution, because study support and especially learning strategies are matters to be applied in the courses in the first place, so they are the responsibility of every lecturer. Well-being and student engagement is proportional represented and created by the institution itself.

# LASSI – LEARNING AND STUDY STRATEGY INVENTORY

*Author: xxx; contact: xxx*

Information provided to students upon start of their studying

Studying at a higher education institution is quite a challenge. And we are not only talking about the curriculum, and approach and volume of study material. Your newly acquired freedom and the new environment are certainly fun or can make you a little insecure. Maybe you have already had a taste of higher education in a different setting and you decided it was not for you. Nevertheless, you are willing to give it another try? Every study programme, every new learning environment requires a specific study approach.

Leuven University College is proud to offer excellent coaching to all of its students. You will have a personal study itinerary coach, called "STBer" at Leuven University College, who will give you expert advice and will be there for you at a number of key moments during your study career at Leuven University College.

In order to provide adequate support your STBer will need information about your student characteristics. To this end, the STBer will use the LASSI test, among other things. This test will give you a good understanding of your study attitude and your study behaviour. The LASSI test has 10 scales. Afterwards you will receive a percentile score per scale and you can read what each scale means. However, you mustn't judge the scales separately. That is the reason why your STBer will discuss your profile with you. For which scales do you get good scores? Which scales still need improvement?

The STBer may give you advice or refer you to the student counselling office, study counselling, revision sessions, student services. Your LASSI results are confidential, they will serve as a coaching tool for you and your STBer. However, the data might be used anonymously for research purposes.

In the end, it is you who assumes responsibility for your own study process. Nonetheless, you can change and improve your study attitude. And for that you can count on us for guidance at any time.

All study (itinerary) coaches and student services of Leuven University College

## **Percentile scores**

- Percentile score of 25 or lower: you must seek assistance of a study or student coach. Please contact your STBer if you cannot do it on your own.
- Percentile score between 25 and 50: it is recommended to seek assistance.
- Percentile score between 50 and 75: you can decide independently whether and/or how you can improve this skill.
- Percentile score of 75 or higher: this skill does not present any problem whatsoever.

## **Attitude**

This scale will measure your overall attitude towards your study programme and your motivation or will to succeed.

If you have a high score, you have probably made the right choice.



If your score is low, you should try to redefine your goals. Maybe your course of study is not the most important part of your life right now or studying is not really related to your future. If you consider studying irrelevant at this time in your life, it might be difficult to motivate yourself to study. Try to find out what you really want to achieve. Discuss it with your study itinerary coach.

### **Motivation**

This scale will measure to which extent you make efforts related to your study, such as reading course material, preparing classes, handing in assignments on time, dedicated studying even though the subject may not always be very fascinating.

If you have obtained a high score on this scale, you have made a good start. Keep it up and take some time out for yourself once in a while.

If your score is low, you must learn to set specific goals for individual and other assignments. It is important to be aware of your own responsibility with regard to your study process and that your study success will be determined by your own efforts rather than by external factors such as luck or bad lecturers.

You should have faith in yourself and your capabilities.

### **Time management**

This scale will measure how efficiently you manage time, in short how good you are at time management. Do you manage to make a realistic study planning and can you stick to it?

If you have obtained a high score on this scale, you are a good planner. You have found the right balance between "study time" and "me time". You are able to set priorities which results in study success. If your score on this scale is low, you must learn how to manage your time more realistically, how you draw up a work plan, how you deal with distractions, how to avoid procrastination.

Once you have learned to use your time efficiently, you will notice that you have extra "me time" and time for other non-study related activities.

### **Anxiety**

This scale will measure how tense or anxious you are when you have an academic assignment.

If you have obtained a high score, you are fine. Once in a while you might experience some stress when you must perform but not to such an extent that it affects your result or maybe it might even have a positive effect.

When your score on this scale is low, tensions and fear affect your performance. You can learn techniques to deal with your fear and to lessen your worries. Your negative thoughts about yourself, not believing in your capabilities, your intelligence, your future and your chances of success prevent you from focussing on your tasks and assignments.

Student services can assist you in seeking help for your fear of failure.

### **Concentration**

This scale will measure your level of concentration and your level of attention with regard to study assignments.

If you have obtained a high score on this scale you are not easily distracted from your goals. The result is efficient study behaviour.

If your score on this scale is low, you are more easily distracted by external factors or internal stimuli, such as negative thoughts, and it becomes harder to focus on your tasks. You can learn techniques to improve your concentration. You learn how to set priorities and take charge of your own study process. You may find the cause of your problem with appropriate guidance.

### **Information processing**

This scale will measure how you process new study material and to which extent you are able to connect your current knowledge with what you have learned and with the new study content.

If you have obtained a high score on this scale, you are capable of meaningful learning. It means that you use the appropriate strategies in order to fully understand the study content which you even approach from a critical perspective.

If you have a low score on this scale, you do not have the necessary strategies and skills to acquire new knowledge and integrate it thoroughly. Often you do not know how to draw up an adequate plan or summary, you start summarising too fast and you fail to find connections, .... In short, you would benefit from a few methods to learn how to apply information processing strategies in order to improve the effectiveness and efficiency of independent study.

### **Selecting main ideas**

This scale will measure your skills with regard to selecting the most important information of the course material.

If you have obtained a high score, you are able to distinguish between what is important and what is less important. You absorb the most important information during class as well as when you are studying.

If you have a low score on this scale, you must learn to identify the main ideas and to focus your attention on the appropriate study material. Studying efficiently means that you can recognise or select the main ideas of the study material. Often courses have supplementary material, such as extra examples and details which enable you to better understand the course material. If you are not able to select the main ideas from the course material, you will have more course material to process which makes studying much harder. Lacking this skill might also mean that you will not have enough time to study all necessary course material before exams.

### **Using study aids**

This scale will measure your skill in using and implementing study aids.

If you have obtained a high score on this scale, you are very skilled at it already, you might have already developed and implemented your own techniques.

If you have a low score on this scale, you must learn which study aids already exist and how you can learn how to use them. Books will often use headers, special lettering, bigger letter types, blanks, summaries, in order to help you process the material. In addition, it is essential that you learn how to improve your own techniques, like drawing diagrams, making summaries and highlighting important paragraphs. Additional support is available, by means of revision sessions, workshops, tutoring or assistance by other students who can help you learn or improve meaningful learning. The selection of services for each study programme is very varied and customised to the student's needs.



## Self testing

Revising study material and self testing are important aspects of studying and passing exams successfully. Revisions, studying personal notes, interrogating yourself when studying or preparing for exams, trying to use new information in a new situation and applying principles and methods, these are all essential methods to test yourself. This scale will measure whether you are aware of the importance of self testing and revision, and the extent to which you use these methods.

If you have obtained a high score on this scale, you use self testing at a regular basis, and not only are you aware of its importance but you also do it correctly.

If you have a low score on this scale, you must still learn the importance of self testing and you should learn specific methods to plan revision moments on a regular basis. Thus, you will be better prepared for exams which will ultimately result in a higher success rate.

## Test strategies

Passing exams successfully depend on your preparation strategies as well as on the strategies which you use during tests or exams. Don't say we didn't warn you.

If you have obtained a high score on this scale, you are well aware what is expected of you with regard to tests, exams, and assignments. You know how to use a different approach for each kind.

If you have a low score on this scale, you should find out more about how to prepare for an exam: is it mainly reproducing what you have learned, must concepts and ideas be applied, how to prepare for a test, how to distinguish between different types of tests (oral exam, MC, ...) and how to prepare a line of reasoning in order to answer the question

## Datamanagement & Business Intelligence in University College Leuven-Limburg

Author: Gerlinde Snoeck, Datamanagement UCLL; contact: xxx

### The purpose of datamanagent

#### *Datamanagent & BI*

- Information gathering
- Aggregating data: raw data -> intelligent data
- Accesible in a uniform way
- Get a clear look
- Facilitate collaboration & desicion making

Data management is all about gathering information. The purpose of data management and business intelligence is tracking and aggregating data and using these data from different sources in order to get a clear look about our students' academic engagement and to lend support to our policy. We want to know who our students are 'through' data collecting. Data let us see more than the usual. It allows us to see better and to look at different items.

At the start of the academic year e.g., everybody wants to know how many students are enrolled: the vice chancellor for the university college, the Deans for their faculty, the programme coordinator for his programme, ... After mid-term, it is interesting to check the number of students again to see movements. Students sometimes change programmes because they have figured out that their initial choice did not turn out to be what they first thought it would be.

The example shows that a BI-system is interesting for staff and management, on policy and executive level: the vice chancellor, deans, the management teams in the faculties, staff members like quality assurance, diversity management, student support, ... The key users are policy makers. The BI-system is meant for decision making and facilitating collaboration. The data give important information to set policy goals and Key Performance Indicators (KPI).

## The content of the BI-system of UC Leuven Limburg

### *Content of BI*

#### 1. Key data

- Students
  - Student population
  - Student efficiency
  - Degree
- Staff
  - Number & FTE
- Research projects

#### 2. Key Performance Indicators (KPI's)

- Performance measurement of strategic goals

In our BI-system, there are two major components: key data and Key Performance Indicators (KPI).

1. The **key data** bring together data about students, staff and research.
  - The student data contain data about student population, study-efficiency, number of degrees and the duration of study, ...
  - For staff we collect data about the number of staff in each programme and the FTE's.
  - The key data for research are the number of research projects, the research budget, the involved partners, ...



These key data gives us in a few clicks important, frequently used, data.

- The second entry are the **KPI's**, which give a performance measurement of the strategic goals. The dashboards shows the target of the KPI, the actual level and an indication of the evolution (a weekly, monthly, ... update). It shows us how we are doing and whether we are reaching the target.

## The Dashboards and the technical system

### *Business Intelligence*

- Internal website
- Dashboards & reports Sharepoint
  - Multidimensional
  - Historical views
  - Interactive
- Detailed information in pivot tables (Excel)

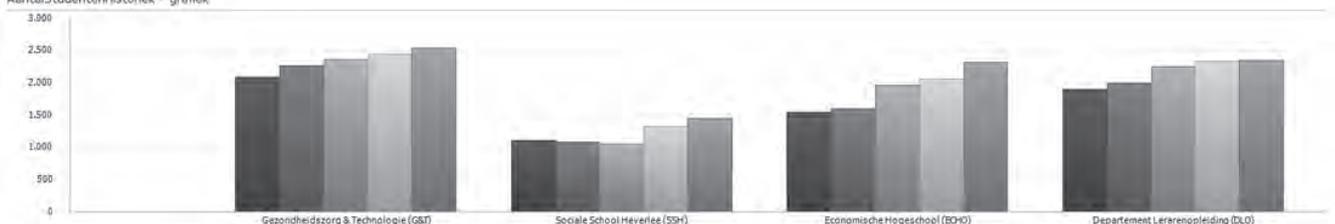
Our BI-system is on an internal website of the university college. Using Sharepoint (Microsoft) as an online collaboration tool in our company, our BI-system is therefore represented in Sharepoint.

The dashboards in Sharepoint present our data in tables or figures. The reports are interactive: you can select all the variables you want (programme level, academic year, gender of student, ...) and make your own report. The reports contains historical data: you can easily go to the situation of the past (a year ago, a month ago, a week ago, ...).

AantalStudentenHistoriek

Organisatie Structuur Hierarchie	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Gezondheidszorg & Technologie (G&T)	2,091	2,255	2,363	2,439	2,541
Sociale School Heverlee (SSH)	1,102	1,077	1,044	1,319	1,442
Economische Hogeschool (ECHO)	1,540	1,590	1,962	2,059	2,315
Departement Lerarenopleiding (DLO)	1,894	1,985	2,250	2,328	2,338

AantalStudentenHistoriek - grafiek

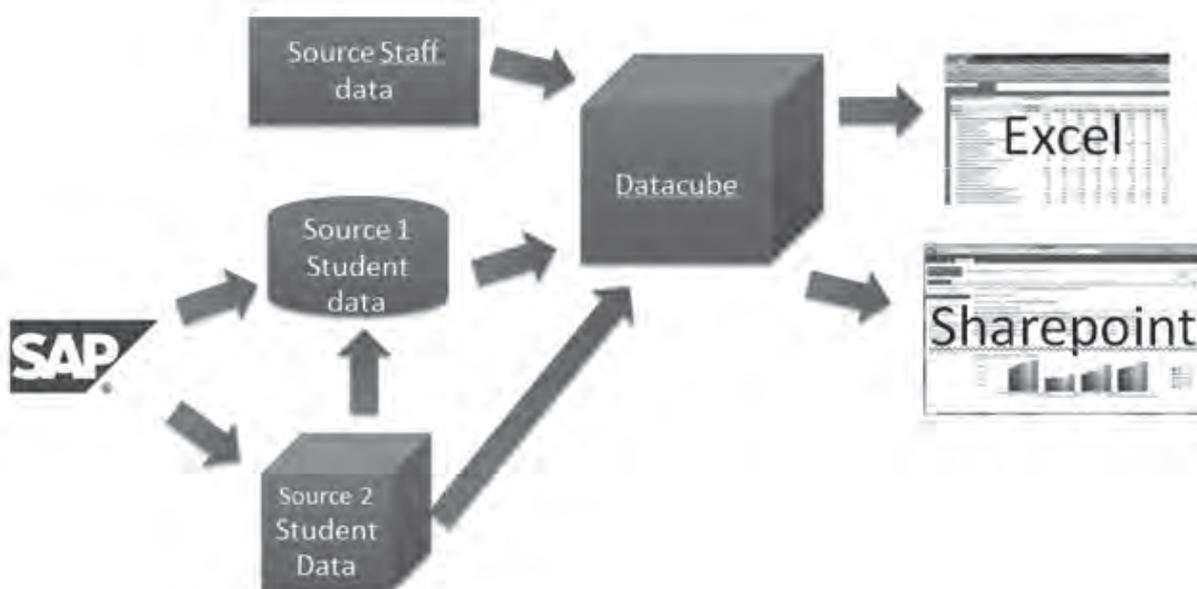


Every report contains the organization chart of our university college. Through a hierarchy we have different levels to show our results on. It is easy to drill down from the institution level to department level to a specific programme level.

<i>Number of students 2014-2015 (Nov - Jan)</i>	2014-2015 Nov	2014-2015 Dec	2014-2015 Jan	Hierachy of organization with the different levels in a department
<b>UC Leuven</b>	8.655	8.638	8.661	← Institutional level
<b>Health &amp; Technology</b>	2.566	2.557	2.558	← Department level
<b>Bachelor degrees Health &amp; Technology</b>	2.255	2.243	2.241	← Basic programmes
Biomedical Laboratory Technology	357	357	360	← Specific basic programme
Chemistry	229	229	229	←
Applied Information Technology	467	464	461	←
Nursing	764	760	759	←
Nutrition and Dietetics	275	273	270	←
Midwifery	163	160	162	←
<b>Advanced Bachelor degrees Health &amp; Technology</b>	208	209	211	← Advanced programmes
Intensive and Emergency Care	76	76	75	← Specific advanced programme
Pediatric Health Care	49	51	54	←
Mental Health Care	56	55	55	←
Oncological Care	27	27	27	←

Next to the dashboards, we also use pivot tables in Excel, which are also linked with the datacube. If one is familiar with pivot tables, it is easy to switch and use the attributes one wants (gender, age, scholarship, ... of the students).

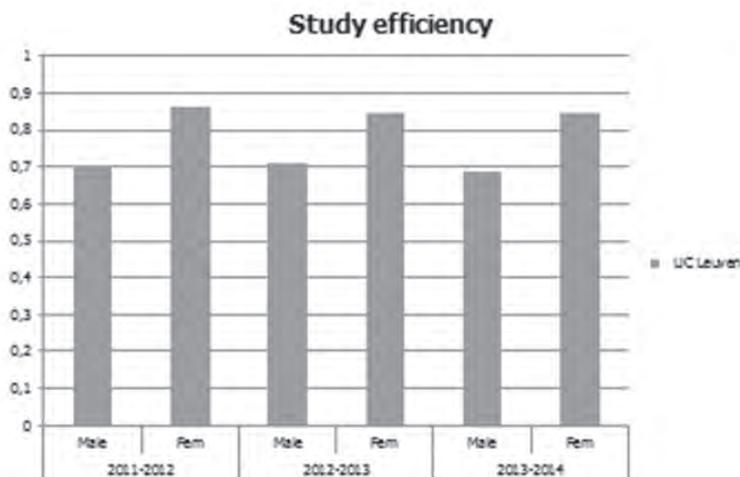
Of course, behind this reporting tool there is an ingenious IT-tool that makes this all possible. The source of the reporting tool is a multidimensional datacube. The aggregation and queries of a very large dataset take place in the datacube.





## An illustration of the use of the BI-system

*Case:how about gender?*



- More analysis
- An investigation after the gender imbalance
- Action plan

To conclude, we give a case of study efficiency as an example of how to use the BI-system.

Study efficiency is calculated by the ratio of credits and study points. The charts in the example above gives the study efficiency of the male and female students from the past three years from UC Leuven. We notice a gap between the male and female students in every year.

A chart like this asks for more analysis. The ratio presented in the figure is on the institutional level. We want to know more about this ratio.

First of all, we wonder what the ratio is for each of our programmes. Is there a gap in every programme? The drill-down organization chart in the BI-systems gives us an immediate answer. Through looking into detail more profoundly, we get a closer insight of the data.

Knowing which practice is behind these data is also very important to understand and interpret the data right and complete. Data can only be explained through their context. The context often offers an explanation.

In UC Leuven we started a gender project to investigate the gender imbalance being concerned about the lower rates of male students. Researchers went to students and took some interviews, wanting to know what they thought about the programme, their perception of didactic systems, testings, expectations of the programme, careers guidance ... We look to the actual practice to learn more about the data. The project is still running. When the investigation is done, it will hopefully lead to an action plan to deal with this issue. And after a few years we will hopefully be able to show new figures with a smaller gap between female and male students.

## The power of Business Intelligence

*Business Intelligence*

**Data let us see more  
see beter  
see different things!**

## WHAT ARE LEARNING OUTCOMES?

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### 1. What are learning outcomes

Learning outcomes mark significantly the paradigm shift from traditional, teacher oriented teaching and learning in pre-Bologna times towards student oriented teaching and learning. There is a cartoon, from the famous American cartoonist Bud Blake, died in 2005, which nicely demonstrates the spirit of this paradigm shift from teaching to learning:



There are different definitions of learning outcomes. The following seems to me to be the most appropriate: Learning outcomes

- describe what a student is expected to know, understand, apply, analyse, describe... and/or be able to demonstrate at the end of a study programme (on a more general level) and at the end of each module (on a more detailed level) and thereby the qualifications and competences to be achieved.
- help academic staff to focus on what they want students to achieve in terms of knowledge, skills and attitudes, implementing the "Bologna process paradigm shift" from teacher oriented teaching to student centered teaching and learning
- provide a useful guide to inform potential candidates and employers about the general and subject specific knowledge and understanding that a graduate will possess (important for the labor market, i.e. employability of graduates). Therefore they have to be assessed.

## 2. International experience and examples of good practices

Study programmes and modules in higher education must be oriented towards learning outcomes according to the nationally (National Qualifications Framework (NQF)) as well as internationally (European Qualifications Framework for Higher Education (QF-EHEA)) agreed qualifications to be achieved in BA, MA and PhD. National Qualifications Frameworks use to require and the QF-EHEA does require qualifications, which are oriented towards programme level on internationally agreed descriptors. These denominators are the so-called Dublin Descriptors. In detail, the Dublin Descriptors define internationally e.g.:

„Qualifications that signify completion of the first cycle (BA) are awarded to students, who achieved the following learning outcomes:

- have demonstrated knowledge and understanding in a field of study that builds upon and their general secondary education, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study;
- can apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study;
- have the ability to gather and interpret relevant data (usually within their field of study) to inform judgements that include reflection on relevant social, scientific or ethical issues;
- can communicate information, ideas, problems and solutions to both specialist and nonspecialist audiences;
- have developed those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy.“

All learning outcomes have to be defined and described on programme level in general and on module (unit) level in detail expressed in terms of qualifications according to the NQF and the Dublin Descriptors like

- Knowledge and understanding
- Applying knowledge and understanding
- Making judgements
- Communicate
- Learn to learn

In order to highlight the role and importance of learning outcomes for teachers, students and those, who decide upon requirements of quality assurance assessments on programme and on module level, it has to be noted:

### a) How to define intended learning outcomes:

- Employ active verbs (in line with Bloom's taxonomy: knowledge, understanding, application, analysis, synthesis, evaluation)
  - Verbs that can be used to give evidence of **knowledge**:  
Define, describe, list, outline, recognise, relate, state, write, measure, match, recount, extract, identify, show, name.

- Verbs that can be used to give evidence of **understanding**:  
 Summarise, describe, compare, classify, contrast, convert, discuss, distinguish, identify, estimate, explain, formulate, give examples of, interpret, translate, express, illustrate, discuss, predict, present, translate, select.
  - Verbs that can be used to give evidence of **application**:  
 Apply, assess, change, choose, demonstrate, discover, calculate, explain how, illustrate, predict, prepare, produce, relate, show, solve, examine, verify, compute, construct, change, classify, experiment, solve.
  - Verbs that can be used to give evidence of **analysis**:  
 Analyse, separate, categorise, order, compare, conclude, contrast, criticise, diagnose, explain, connect, differentiate, distinguish, examine, justify, infer.
  - Verbs that can be used to give evidence of **synthesis**:  
 Account for, argue, combine, compose, conclude, create, derive, develop, formulate, generalise, generate, substitute, integrate, modify, order, organise, plan, propose, design, invent, restate, report, revise, select, summarise, synthesise, teach, tell.
  - Verbs that can be used to give evidence of **evaluation**:  
 Appraise, value, decide, determine, grade, recommend, select, discriminate, choose, compare, conclude, criticise, defend, evaluate, judge, justify, rank, value, assess, summarise, criticise, rate.
- Emphasize the teaching-learning-assessment-employability relationship (“constructive alignment”)

An example of good practice of defining intended learning outcomes on programme level according to the Dublin Descriptors is the following example of a MA-programme in Management:

The objective of the Master’s Programme in Management is the acquisition of the qualification to take on responsibility competently and in an ethically reflected manner, building on knowledge acquired during the Bachelor’s programme. This includes being able to take on responsibility in unfamiliar, ambiguous, conflictual, and complex leadership and decision-making situations in companies and non-profit organizations.

On the basis of this, successful graduates are able to connect their knowledge and skills in the field of general management with the specializations they have selected, to continue autonomously to extend their knowledge and skills and independently develop, communicate and implement ideas, obtaining acceptance of these ideas and thus shaping and changing the task area they have been assigned (and, beyond this, shaping and changing the entire organization and its environment).

An integral part of this objective is the acquisition of the competence to autonomously conduct research projects, in accordance with state-of-the-art research approaches. Graduates are therefore able to perform a sound analysis and evaluation of complex leadership and decision-making situations by applying scientific theories and methods (in particular from the field of cultural sciences).

An example of good practice of defining intended learning outcomes on module (unit) level according to the Dublin Descriptors is the following example of the same MA-programme (modul “Controlling – Leading for results”):

Students who have successfully participated in this module will be able:

- to identify management based on targets and performance indicators as a controlling instrument for entrepreneurial response.



- to describe the demands and expectations of the different stakeholders with regard to controlling.
- to define and apply key performance indicators (KPIs).
- to analyze and critically examine the performative character of financial models, indicators, result presentations and the communicative rituals related to these.
- to understand the computational presentation of entrepreneurial activity as the language of financial management of a company and as a social construction.

When nationally or internationally accrediting those programmes, quality assurance agencies will check, whether the learning outcomes on programme level as well as on module (unit) level are convincingly and transparently defined and described, following the already quoted Bucharest Communiqué: „The development, understanding and practical use of learning outcomes is crucial to the success of ECTS, the Diploma Supplement, recognition, qualifications frameworks and quality assurance – all of which are interdependent.“

## b) Challenges for teachers

### 1. Paradigm shift in teaching

The introduction and the use of learning outcomes is necessarily linked to the adoption of student centered teaching and learning. What does this mean? It means that a shift in the culture of teaching and learning in higher education is necessary for both, teachers as well as students, but, indeed, more challenging for teachers. When the Bologna process started, teachers used to be already there. Then they had to accept the paradigm shift and to learn to change their attitude and style of teaching. This process is not easy and in many countries has yet to be completed. International experience shows that the greatest obstacle for successfully implementing the Bologna process has been the mentality of the faculty involved, which can create huge barriers. It took and takes great effort on the behalf of deans, chairs and other responsible persons to convince or at least to persuade the respective faculty members to get involved. The following table shows this challenging paradigm shift for teachers:

Lecturer-oriented teaching	Student-oriented teaching
Lecturer is the centre of attention	Student is the centre of attention
Transmission of information by the lecturer	Active knowledge acquisition by the student
The learning method is a general, firm and standardized one	There are different individual learning methods
Lecturer for the student	Student is self-controlling
Lecturer explains the correct answers to the particular problems	Lecturer asks questions, which are answered by the students
Lecturer leads the learning process	Lecturer accompanies the learning process

Lecture room as workshop	Media library and group room as workshop
Static and invariable	Dynamic and variable
Lecturer and student stand opposite one another	Lecturer and student work together
Programme planning is adapted to the examinations	Programme planning is adapted to feedback
Student can isolate himself/herself and can turn up from time to time	Social competences gain importance
Lectures	Discussions
Assessment on the basis of an exam	Continuous assessment
Timetable	Programme plan

## 2. Application of ECTS

The introduction and the use of learning outcomes is necessarily linked with an additional challenge: The application of the European Credit Transfer and Accumulation System (ECTS). ECTS is based on and has to be calculated transparently on learning outcomes and the learning process. ECTS is a quantified means of expressing the volume of learning, based on the achievement of learning outcomes and their associated workloads. In order to make it possible that students can successfully finish their studies in due time, their workload - needed to achieve the intended learning outcomes in due time - has to be fairly and appropriately calculated. The calculated workload must include all elements of study-related work, i.e. lectures, self-study, preparation for examinations, examinations etc. The number of ECTS-points linked to a module (unit) has to be first estimated and then – based on experience - calculated in relation to the respective intended learning outcomes.

For the teachers, this challenge is, indeed, not easy to face, but it is necessary to be managed. At the beginning, they will estimate the time needed and define the workload based on their estimation. But after a while, e.g. after two years, they have to check, whether the estimated workload really meets reality and, if not, they have to adjust the students' workload accordingly. Thus, continuous evaluation of the workload is required. This is true for Bachelor programmes as well as for Master programmes. PhD programmes may require some additional special learning outcomes like respective methodological approaches and may therefore offer respective modules linked with ECTS. It may be, but is not necessary.

## 3. Affiliation with Diploma Supplement

It is not by chance that the ministers stated in the Bucharest Communiqué: „The development, understanding and practical use of learning outcomes is crucial to the success of ECTS, the Diploma Supplement, recognition, qualifications frameworks and quality assurance – all of which are interdependent.“ The reason is very obvious. The Diploma Supplement is a document issued to all graduates of higher education institutions. It describes the qualification they have received in a standard format The Supplement contains among other information, contents and results gained such as:

- Programme requirements
- Programme details: (e.g. modules or units studied), and the individual grades/marks/credits obtained

Thus, the Diploma Supplement is the source of evidence e.g. for employers regarding the achieved qualifications of applying graduates, the information about the modules (units) studied and the respective achieved learning outcomes are of high value. Furthermore, the Diploma Supplement is also a valuable means of improving recognition of foreign qualifications.

### *c) How to assess achieved learning outcomes*

It is not by chance that the ministers stated in the Bucharest Communiqué: „We call on institutions to further link study credits with both learning outcomes and student workload, and to include the attainment of learning outcomes in assessment procedures.” Learning outcomes are an integral part of outcome-focused approach to teaching, learning and, in particular, to assessment procedures. Experts call it „constructive alignment“, which means that teaching, learning and respective assessments are consistently oriented towards intended and – at the end – achieved learning outcomes. Achieved learning outcomes define the employability of the graduate. Vice versa: Intended learning outcomes must take into account the demand of the labor market.

Therefore, in order to increase transparency of the achieved qualification with regards to the national and international labor market (as well as to improve recognition of qualifications achieved at other HEIs), examinations should be structured in order to measure the achieved learning outcomes, e.g. differ between:

- Subject specific competencies
  - cognitive
  - functional
- generic competencies, e.g. problem-solving; computing; foreign languages; transfer skills; abstract thinking etc.
- social skills, e.g. communication; cooperation; conflict-solving etc
- personal competencies, e.g. self-management; ethic attitude etc.

In this context, it is most important for the assessors to define integrative assignments for assessments. „Integrative assignments“ means to define assignments, which cover all intended learning outcomes of the module (unit) in order to assess all achieved learning outcomes. That’s, indeed, a great challenge for the assessors. Last, but not least, quality assurance measures, i.e. evaluation- and accreditation procedures will take into account, to what extent assignments and types of examinations on module (unit) level are really targeting and appropriate for measuring achieved learning outcomes.

## **5. Summary:**

Taking into account the already cited Bucharest Communiqué, it can be noted: In order to successfully implement the learning outcomes on programme level and on module (unit) level, a higher education institute necessarily needs:

- the National Qualifications Framework as reliable reference document
- national regulations supporting and facilitating the implementation
- appropriate human resources:
  - o willing to accept the paradigm shift and

- o pedagogically competent faculty
- appropriate assignments (focussing at intended and achieved learning outcomes)
- appropriate types of examination (meeting the requirement of really measuring the intended learning outcomes)

Literature: Declan Kennedy, Writing and using learning outcomes, published by University College Cork, Ireland, 2007



## IMPORTANCE/UNDERSTANDING OF ECTS

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### Importance/understanding of ECTS

- Ensures transparency of programs and the related workload and protects students from overloaded programs;
- Facilitates the movement of students and graduates for study and work;
- Helps to build trust, transparency and cooperation between higher education systems;
- Emphasizes learning outcomes and related assessment;
- Facilitates flexible learning pathways, lifelong learning and the use of new method of learning, teaching and assessment;
- Underpins the shift to programs developing skills and competences relevant to the needs of society.

**Workload:** a quantitative measure of the learning activities that may feasibly be required for the achievement of the learning outcomes (e.g. lectures, seminars, practical work, private study, information retrieval, research, examinations).

**Credit:** a quantified means of expressing the volume of learning based on the achievement of learning outcomes and their associated workloads.

### Allocation of ECTS

There are several approaches to credit allocation, and it is up to the institutions to decide on which method to use. The alternatives presented below illustrate two different approaches to allocating credits:

**1. Bottom up:** The teaching staff define the learning outcomes of each programme component, describe the learning activities and estimate the workload typically needed for a student to complete these activities. Proposals are collected, analysed and synthesised and the estimated workload is expressed in credits.

×The implementation and use of ECTS by higher education institutions should be quality assured through appropriate processes (e.g. internal and external quality reviews and students' feedback)

×Using this approach, all the teaching staff are involved in the process of credit allocation. They can put forward their proposals in terms of learning outcomes, and estimate the workload necessary to achieve them. Through discussion and defining of priorities they can come to a final decision on the basis of the credits available (60 for each year). This procedure may result in different numbers of credits being attributed to single components (e.g. 3, 5, 8).

×By using this option, institutions allow for maximum freedom in designing each component with regard to the learning outcomes and related workload. On the other hand, components of different sizes may be problematic when it comes to multidisciplinary or joint programmes or mobility.

**2. Top down:** Alternatively, the higher education institution or the faculty may decide from the start to standardise the size of educational components, giving each one the same credit value (e.g. 5) or multiples of it (e.g. 5, 10, 15), and thus predefine the number of credits to be allocated per component. In this case, the course units are often called 'modules'.

×Within this predefined structure, the teaching staff define appropriate and feasible learning outcomes and describe the learning activities, on the basis of the standard size of the components. The estimated workload must be consistent with the number of credits allocated to that component.

### **Tuning the workload (bottom up)**

The objective of this part of the training is to support

×the person responsible for a module

×the head of the study programme and

×the involved staff members

in their task of designing, evaluating and adapting the specific workload of a module.

Allocation of ECTS needs teamwork!

### **Principle guidelines:**

- Start with the objectives and the intended learning outcomes
- Intended learning outcomes have to fit into the overall aims of the study programme and the vision and mission of the HEI and the NQF as well.
- Formulate precise employability oriented learning outcomes
- Define didactics, methods and forms of interaction to facilitate the achievement of the intended learning outcomes
- Define the necessary content to facilitate the achievement of the learning outcomes
- Use content exemplarily; reduce content in favour of the achievement of intended learning outcomes and employability
- Define the type of examination appropriately in order to properly measure the achieved learning outcomes
- Define the mandatory and optional (pre- and post) readings
- Define the amount of necessary self-study hours and contact hours

### **Reading:**

- The average reading speed for scientific articles is 100 – 200 wpm (words per minute)
- The average page of a scientific article is 400 – 600 w.
- A 10 page article would require at least 40 – 60 minutes for reading and at least the same amount of time for making excerpts, notes, drawing connections
- The amount of mandatory reading therefore should be limited.
- Tipp: give precise pages, not complete books
- Put additional books, articles in recommended reading

### **Contact hours vs. Self-study hours**

- By rule of thumb: The self-study (including examination) should vary between 60% and 75% of the whole students' workload according to the increasing independence of students
- Self study can contain reading, group work, preparation of presentations, learners portfolio etc.
- Estimate the hours necessary for self-study taking into account your didactic,

methods, interaction, content, examination

## **Tuning the workload (top down)**

### **Contact hours vs. self-study hours**

Example:

You want to design a module with 5 ECTS.

5 times 30 hours equals 150 hours.

The estimated self-study to achieve the learning outcomes might be 6 hours per week

6 hours per week times 15 weeks = 90 hours

Remaining 60 hours

60 hours divided by 15 weeks equals 4 teaching hours per week

Now check, whether 4 teaching hours per week contact time would be sufficient to achieve the learning outcomes Take into account didactics, methods and forms of interaction

### **If it doesn't add up, rethink:**

- How could you change the workload to still achieve the intended learning outcomes:
- Reduce content, be exemplary
- Adapt examination
- Are all the learning outcomes (equally) important to achieve the aims of the study programme (employability)
- Can we change the ECTS at the expense of another module?

### **Evaluation:**

- Evaluate the workload constantly
- Evaluating can be managed in different ways through questionnaires, focus groups, or interviews, or by monitoring the results achieved. Whatever method is used, feedback from students, staff and where appropriate, stakeholders should constitute an essential element for checking and revising credit allocation.
- Evaluate the module once per semester
- Adapt according to the findings

### **Tuning the workload by staff members, if the module description already exists**

1. Analyse the module, which includes
  - analysing the quantum of teaching hours per week per module
  - estimating the expected self-study hours taking into account reading-time and the respective type of assessment as well estimating the respective hours needed by students (e.g. writing assessment may need 80 hours; essay may need 20 hours; multiple choice test may need 10 hours etc.)
2. Sum up the hours up to one semester
3. Divided by score hours equals number of ECTS per module per semester

### **Module**

Modules combine subjects in thematically and chronologically complete, self-contained course units assigned with a number of credits. They can be made up of different teaching and learning formats (such as lectures, tutorials, practical work assignments, e-learning, research training, etc.).

A module may comprise content which can be taught within one semester or academic year, or extend over several semesters. To reduce the examination burden modules generally conclude with one examination, the result of which is entered on the degree certificate. In specific, justified cases a number of modules may also be concluded with a single examination.

The content of the examination for a particular module is to be guided by the learning outcomes defined for that module. The scope of the examination should be limited to the extent necessary for that purpose, i.e. to measure the achieved LOs



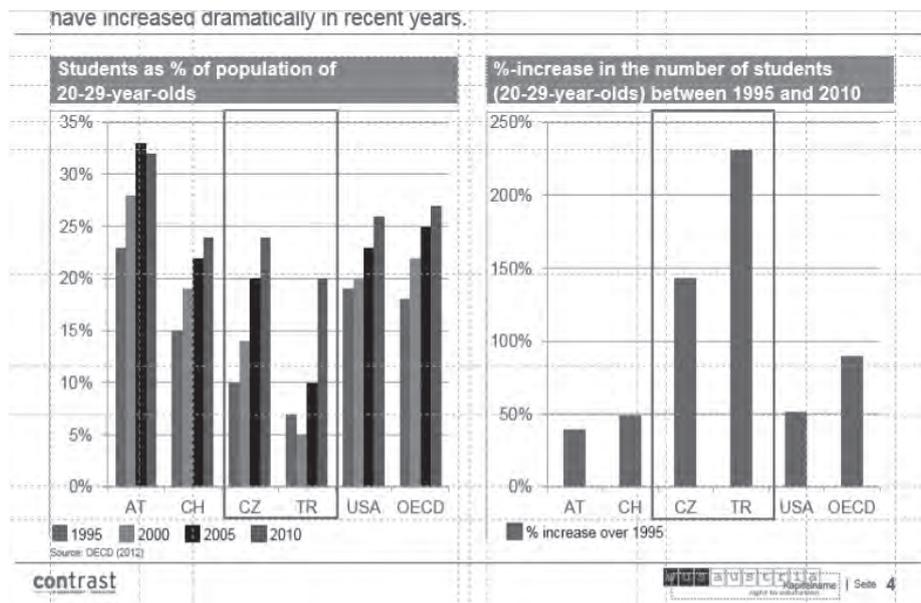
## FINANCIAL MANAGEMENT IN HIGHER EDUCATION

Authors: Contrast Management Consulting, WUS Austria; contact: adi.kovacevic@wus-austria.org

1. Funding of Higher Education Institutions
2. Performance Management in Higher Education

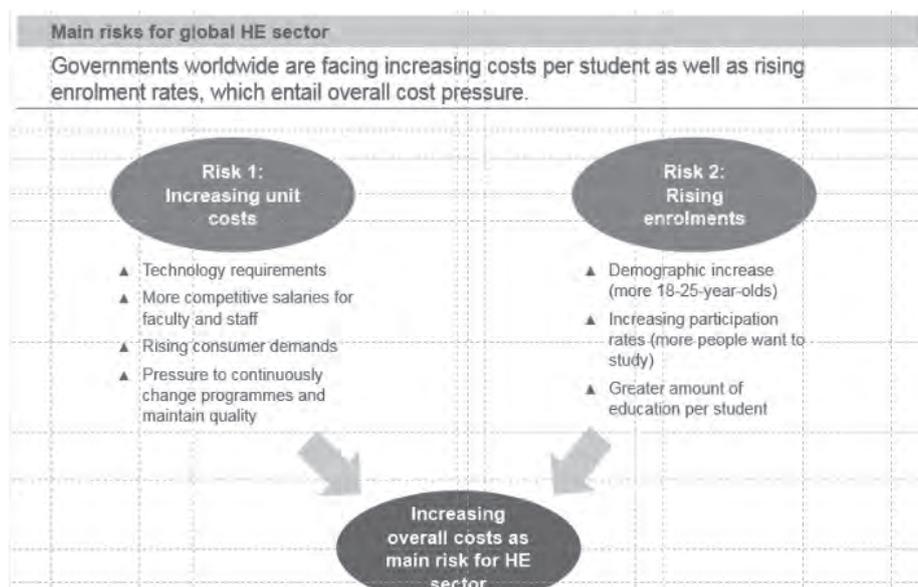
### *Rising enrolments globally*

Especially in Eastern European countries such as Czech Republic or Turkey enrolments have increased dramatically in recent years.

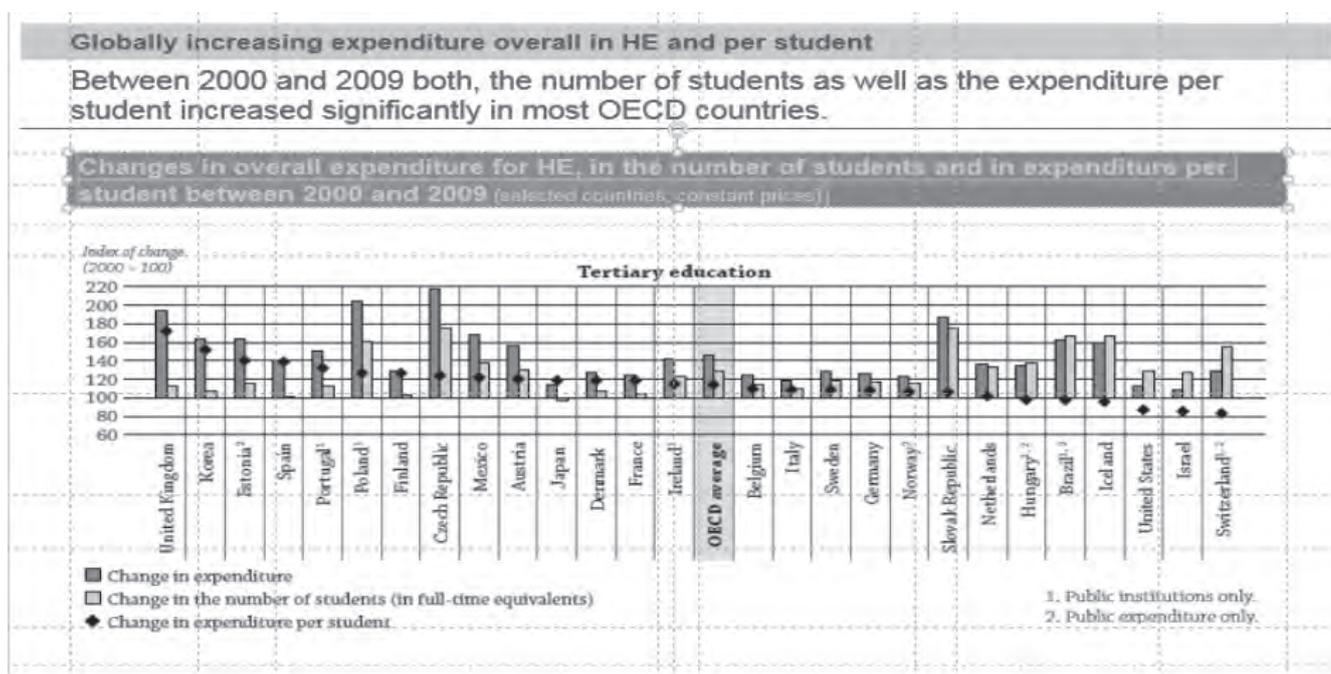


### *Main risks for global higher education sector*

Governments worldwide are facing increasing costs per student as well as rising enrolment rates, which entail overall cost pressure.



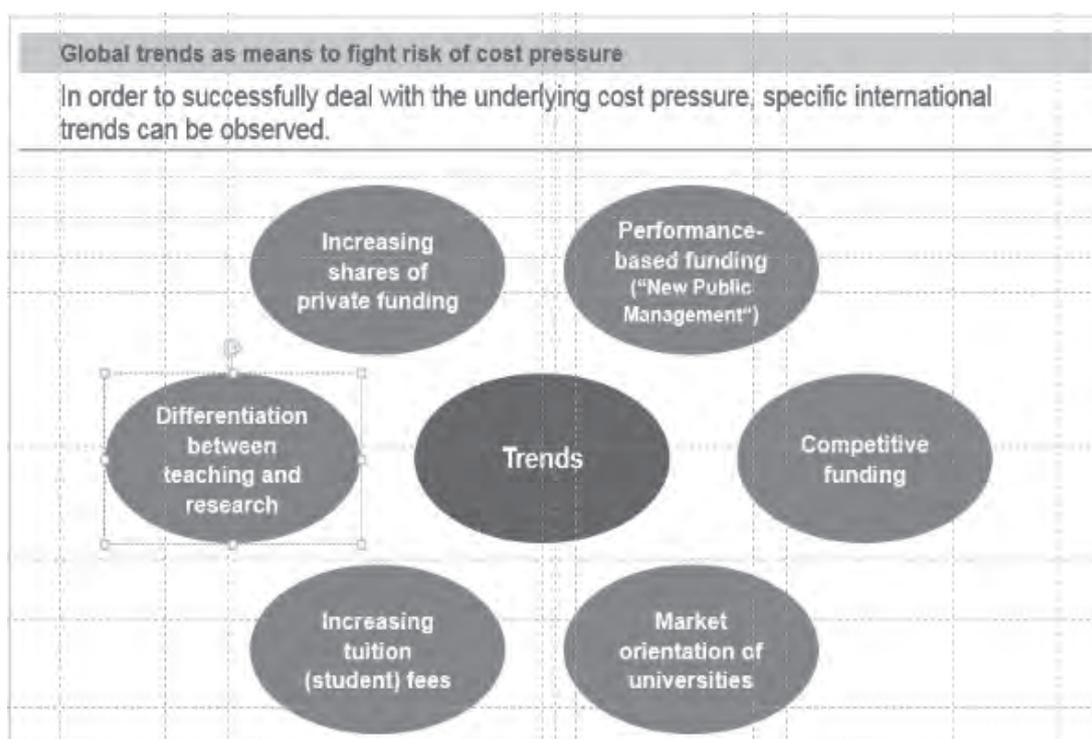
Globally increasing expenditure overall in HE and per student



Between 2000 and 2009 both, the number of students as well as the expenditure per student increased significantly in most OECD countries. Changes in overall expenditure for HE, in the number of students and in expenditure per student between 2000 and 2009 (selected countries; constant prices)

Global trends as means to fight risk of cost pressure

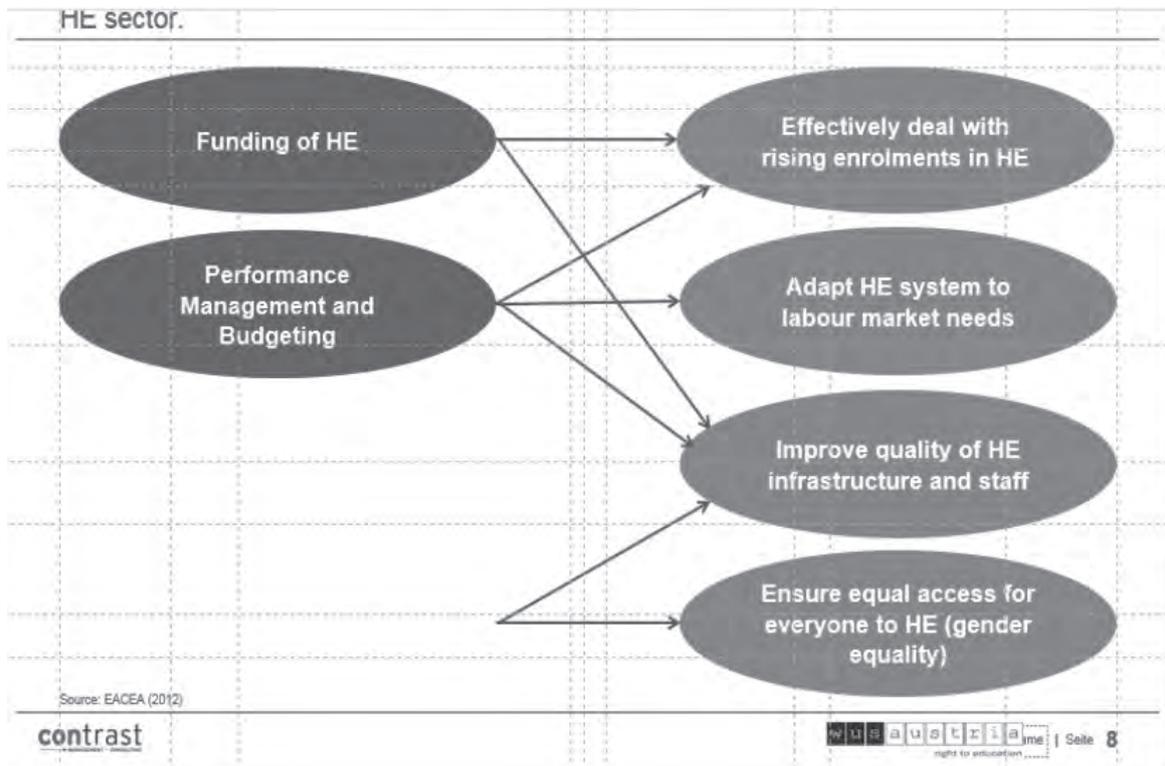
In order to successfully deal with the underlying cost pressure, specific international trends can be observed





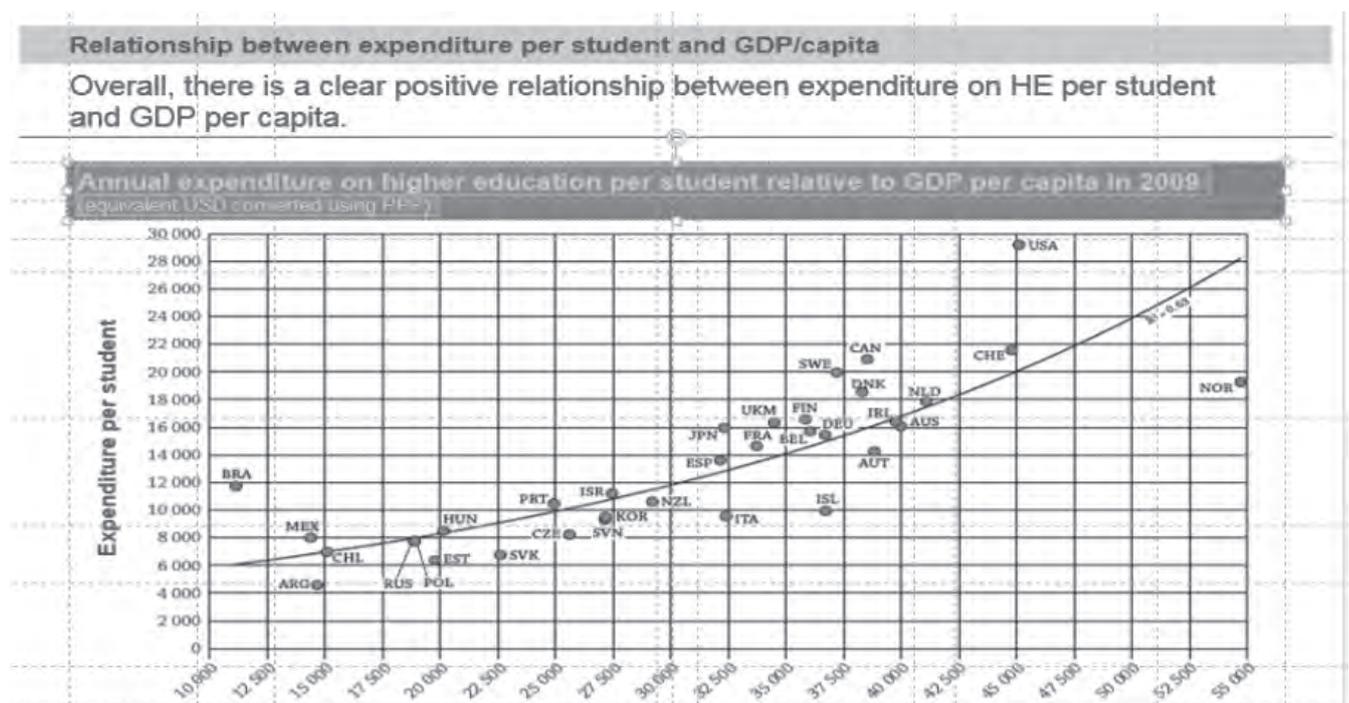
### Topics discussed

The topics we are going to discuss in the workshop deal with the key challenges of EU HE sector.

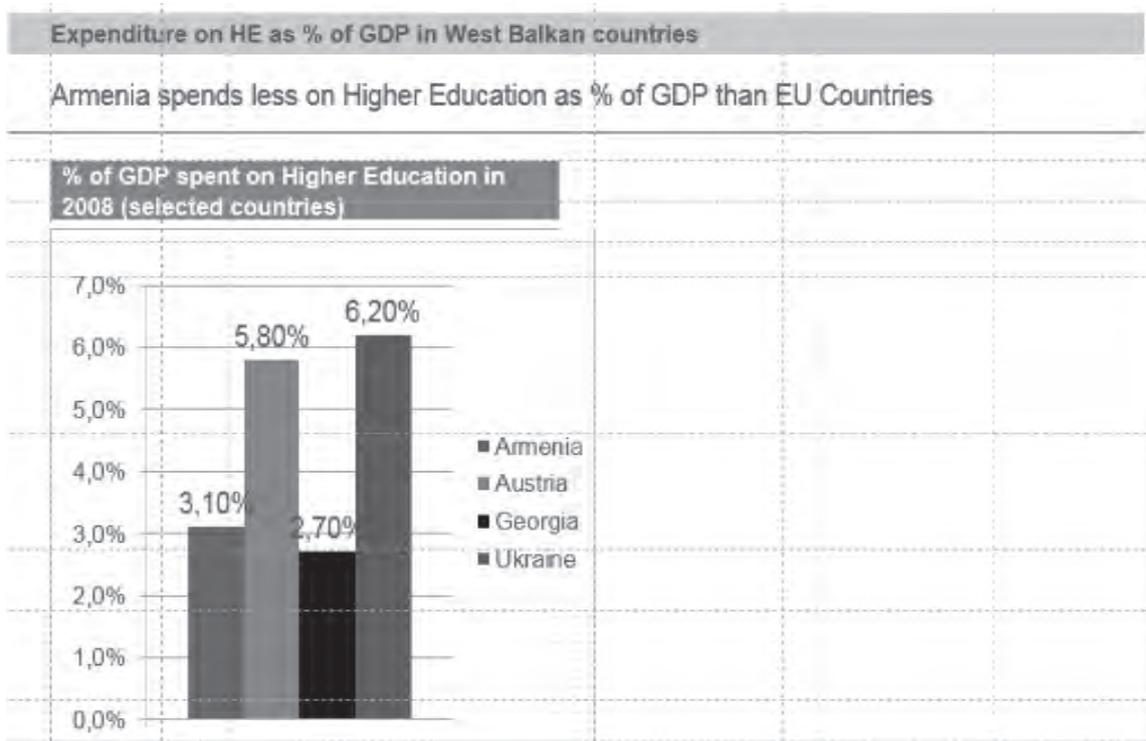


### Relationship between expenditure per student and GDP/capita

Overall, there is a clear positive relationship between expenditure on HE per student and GDP per capita. Annual expenditure on higher education per student relative to GDP per capita in 2009 (equivalent USD converted using PPP):

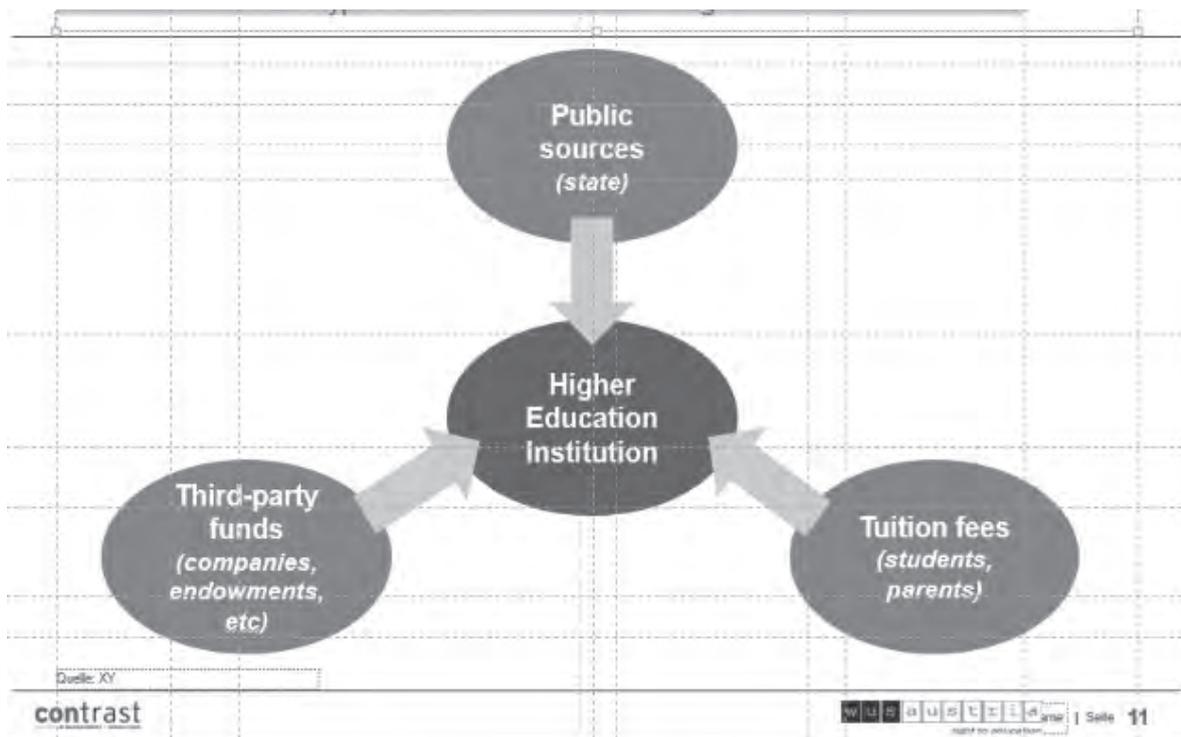


Expenditure on HE as % of GDP in West Balkan countries  
 Armenia spends less on Higher Education as % of GDP than EU Countries.  
 % of GDP spent on Higher Education in 2008 (selected countries):



*Types of financial sources*

There are three main types of financial sources for Higher Education Institutions.





## Two different methodologies of financing HEIs

Besides general input-oriented financing, two new forms of financing HEIs have developed over the last decades.

Two different methodologies of financing HEIs	
Besides general input-oriented financing, two new forms of financing HEIs have developed over the last decades.	
Performance-based financing	Competitive financing
<ul style="list-style-type: none"> <li>▲ Certain outputs and services, which are defined for several years in performance agreements between the university and the Ministry, have to be performed by universities</li> <li>▲ Performance is measured by certain criteria and other indicators defined in the performance agreements</li> <li>▲ Main goal: Provide a reward for those with a record of successful research, and thus constitute a strong incentive for improving the quality of research as measured by the selected performance indicators</li> <li>▲ Underlying assumption: Achievement of output is directly related to research activities</li> </ul>	<ul style="list-style-type: none"> <li>▲ Research projects are offered/tendered to HEIs that apply and are evaluated against each other through peer reviews</li> <li>▲ Can be offered by the government or companies</li> <li>▲ More common among technical universities</li> <li>▲ Two main characteristics               <ul style="list-style-type: none"> <li>– Universities are required to support aims intended to enhance national economic development</li> <li>– Government makes increasing use of competitive mechanisms for resource allocation, developing a market-oriented approach to university research funding</li> </ul> </li> </ul>

## 1. Funding of Higher Education Institutions

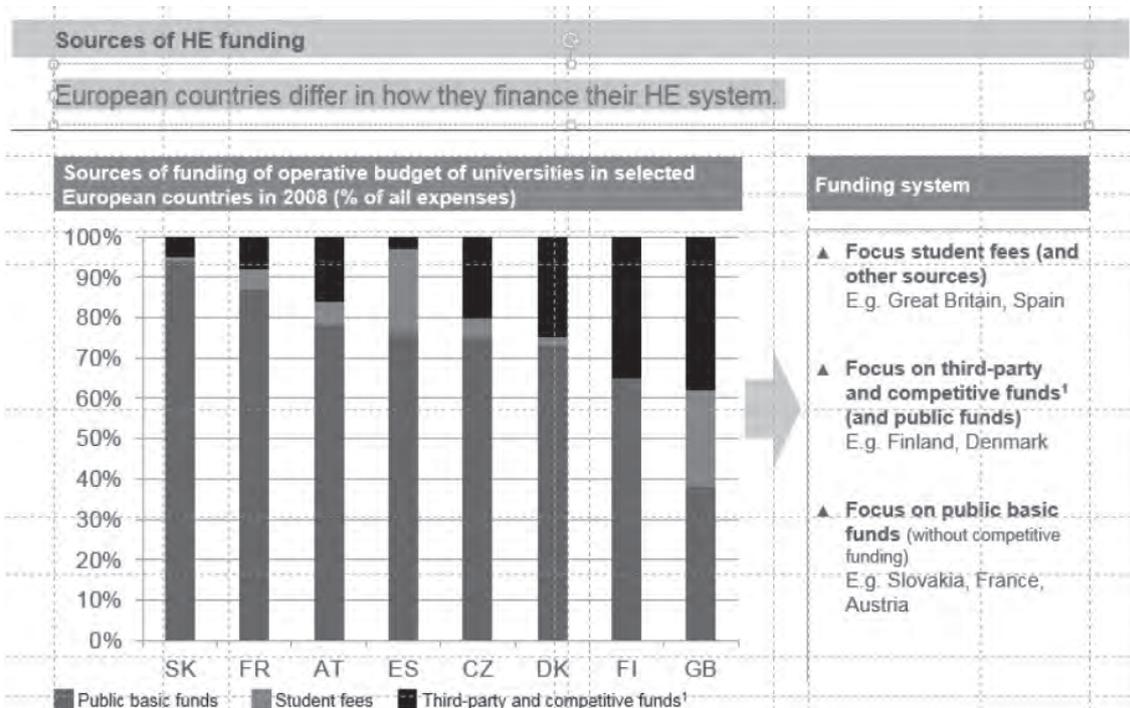
## 2. Performance Management in Higher Education

### Performance-based vs. competitive funding

Performance-based vs. competitive funding		
Both types of funding, performance-based and competitive funding, entail advantages and disadvantages.		
	Performance-based financing (based on indicators)	Competitive financing (through projects & programmes)
Advantages	<ul style="list-style-type: none"> <li>▲ Supports output-orientation (e.g. number of graduates, number of publications)</li> <li>▲ Gives incentives for researchers to focus on results</li> <li>▲ Facilitates planning</li> <li>▲ Guarantees solid basic education</li> </ul>	<ul style="list-style-type: none"> <li>▲ Helps to prioritize and to maintain flexibility</li> <li>▲ Enhances cooperation through diversification of sources of funding</li> <li>▲ Produces <u>learnings</u> from feedback through project reviews</li> <li>▲ Creates accountability</li> </ul>
Disadvantages	<ul style="list-style-type: none"> <li>▲ May promote short-term orientation</li> <li>▲ Hardly fosters interdisciplinary cooperation</li> <li>▲ May lead to homogenization among different research approaches</li> <li>▲ May cause "publication inflation" if indicators become objectives</li> <li>▲ Rewards previous achievements</li> </ul>	<ul style="list-style-type: none"> <li>▲ Hinders long-term career development for junior researchers</li> <li>▲ Creates additional time expenses</li> <li>▲ Implicates risk when projects are formed with new partners</li> <li>▲ Reduces incentives to take on risky and long-term projects</li> </ul>

Both types of funding, performance-based and competitive funding, entail advantages and disadvantages.

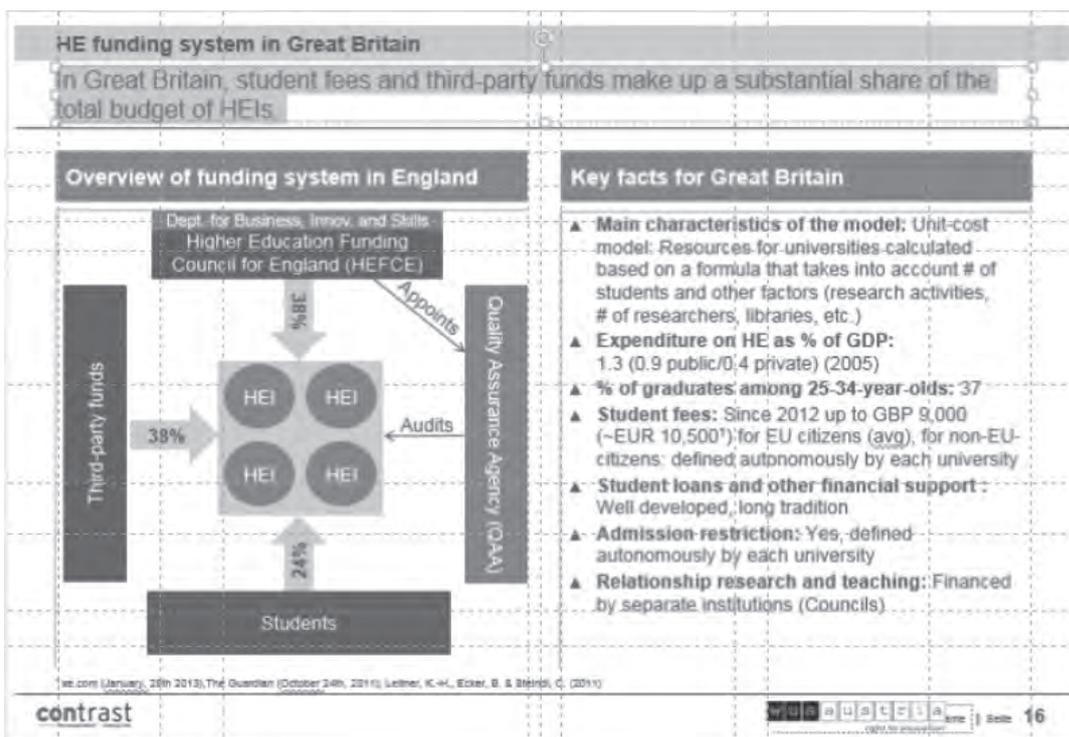
Sources of HE funding



European countries differ in how they finance their HE system.

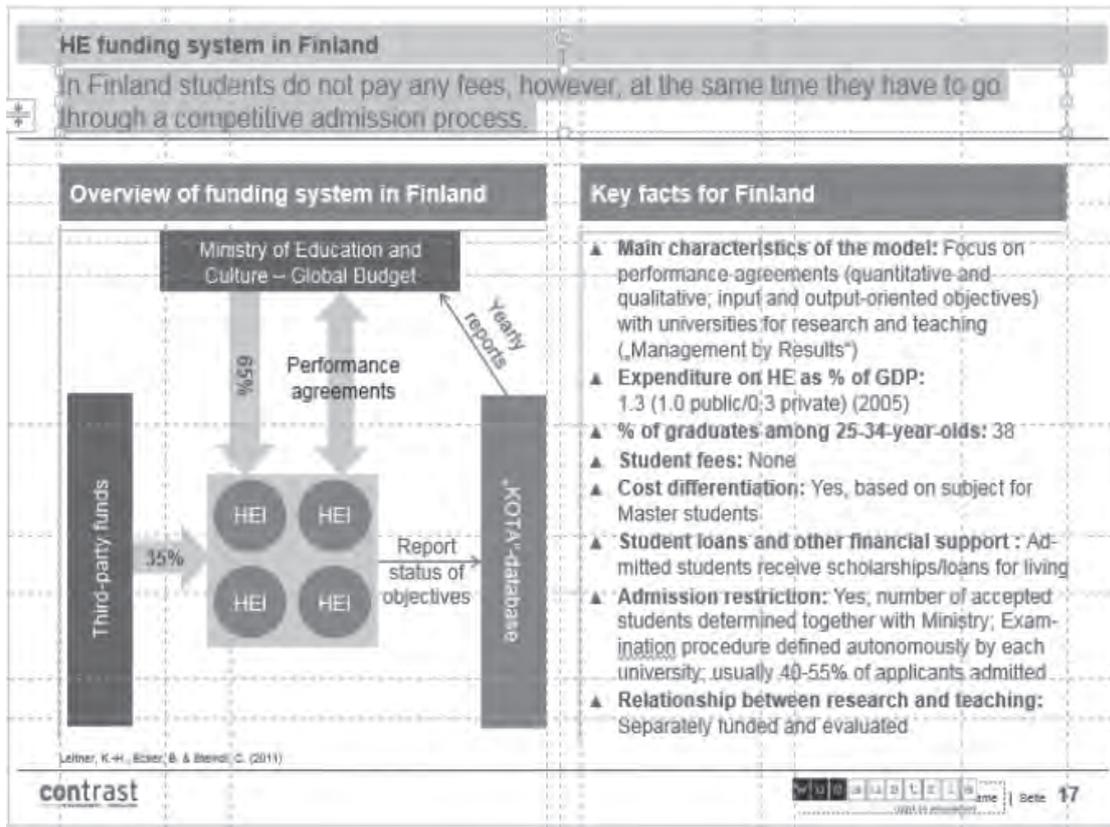
HE funding system in Great Britain

In Great Britain, student fees and third-party funds make up a substantial share of the total budget of HEIs.





## HE funding system in Finland



In Finland students do not pay any fees, however, at the same time they have to go through a competitive admission process.

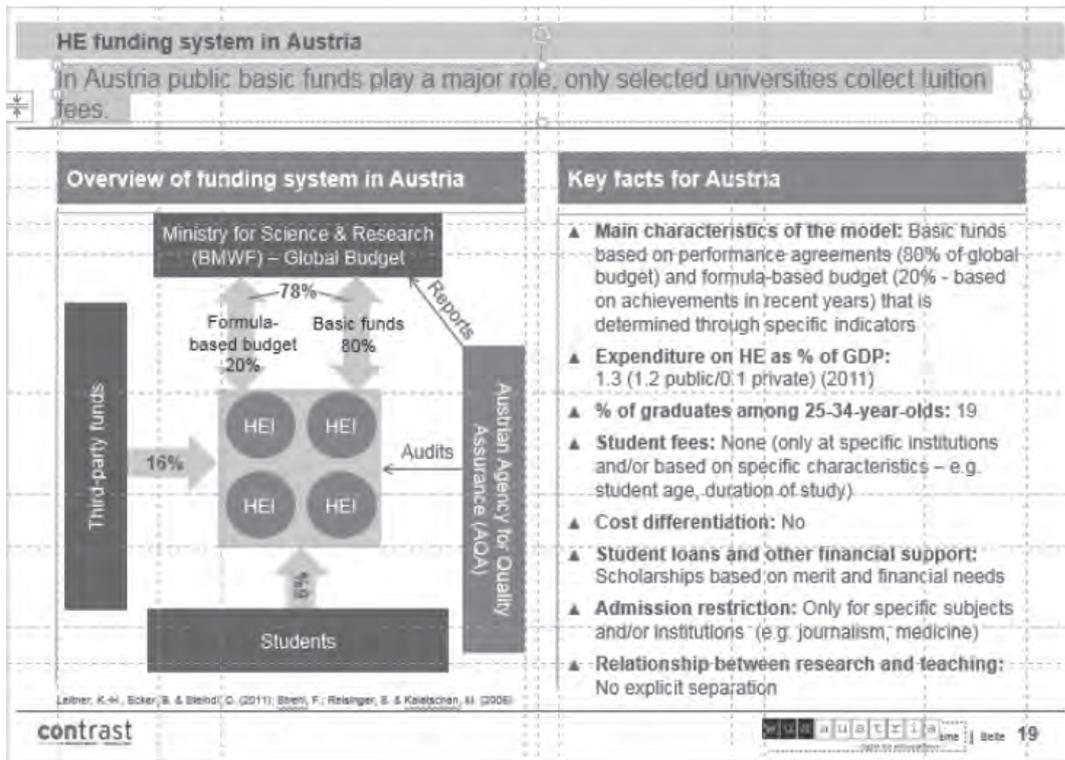
### Example for performance agreements in Finland

The performance agreement between the University of Oulu and the Ministry of Education and Culture includes four central targets and five measurable objectives.

**Example for performance agreements in Finland**  
The performance agreement between the University of Oulu and the Ministry of Education and Culture includes four central targets and five measurable objectives.

Central targets for development for the University of Oulu for 2013-2016	Objectives (average for 2013-2016)
<ul style="list-style-type: none"> <li>▲ The University will strengthen its <b>international research cooperation</b> with the universities that are best for developing its focus areas, utilizing the results of the overall assessment of research in 2013</li> <li>▲ The University will enhance its measures to <b>acquire internationally contested research funding</b> (proposition by the University of Oulu)</li> <li>▲ The University will enhance its measures to improve the <b>completion of studies</b></li> <li>▲ University will <b>renew its student admission</b></li> </ul>	<ul style="list-style-type: none"> <li>▲ Higher university degrees: 1,545</li> <li>▲ Doctoral degrees: 158</li> <li>▲ Lower university degrees: 1,280</li> <li>▲ Foreign degree students: 600</li> <li>▲ Incoming or outgoing (for minimum of 3 months) exchange students: 900</li> </ul>

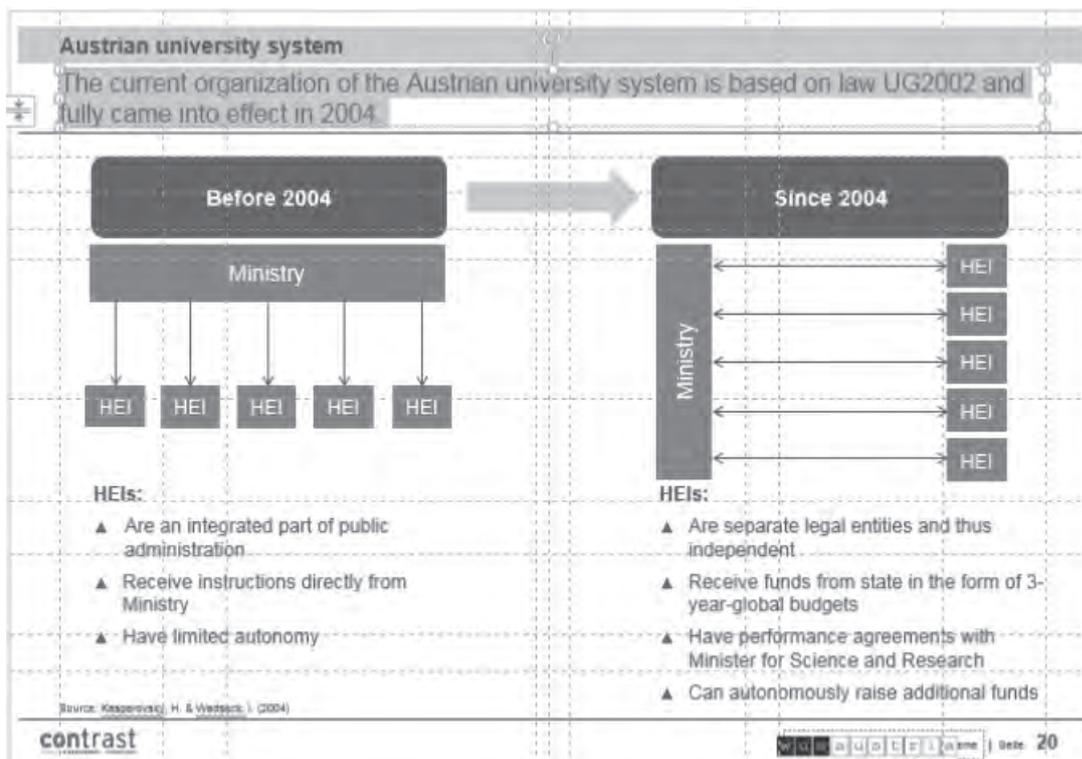
## HE funding system in Austria



In Austria public basic funds play a major role, only selected universities collect tuition fees.

### Austrian university system

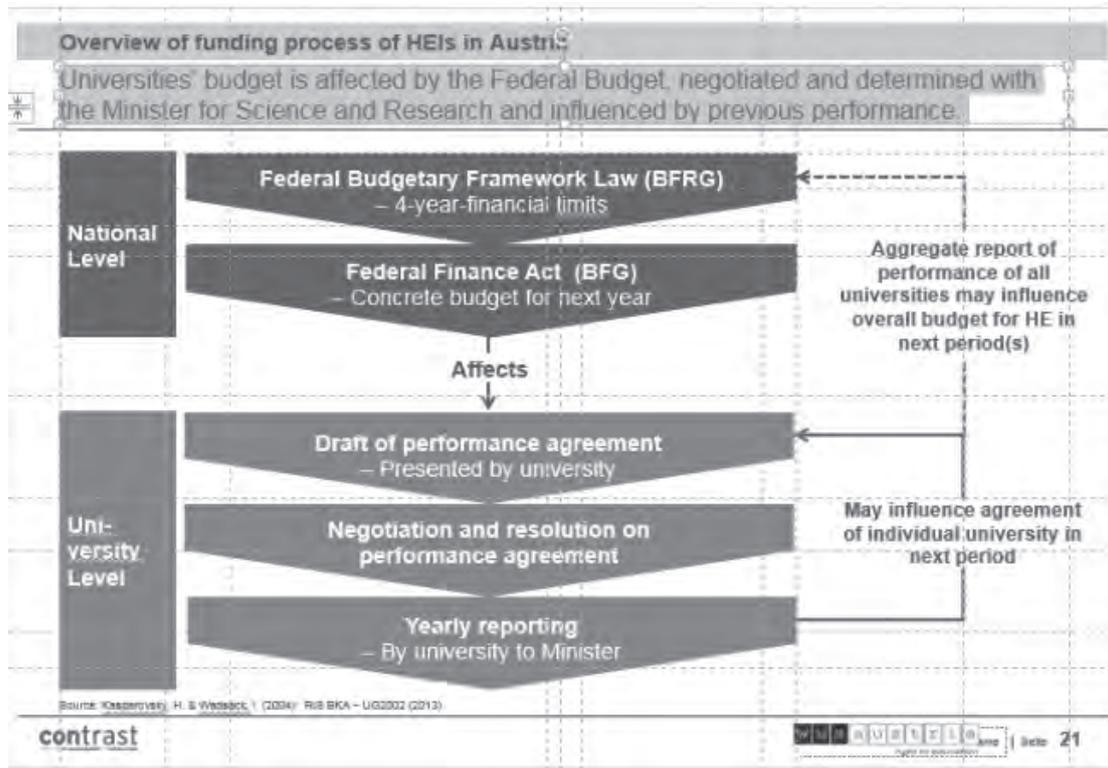
The current organization of the Austrian university system is based on law UG2002 and fully came into effect in 2004.





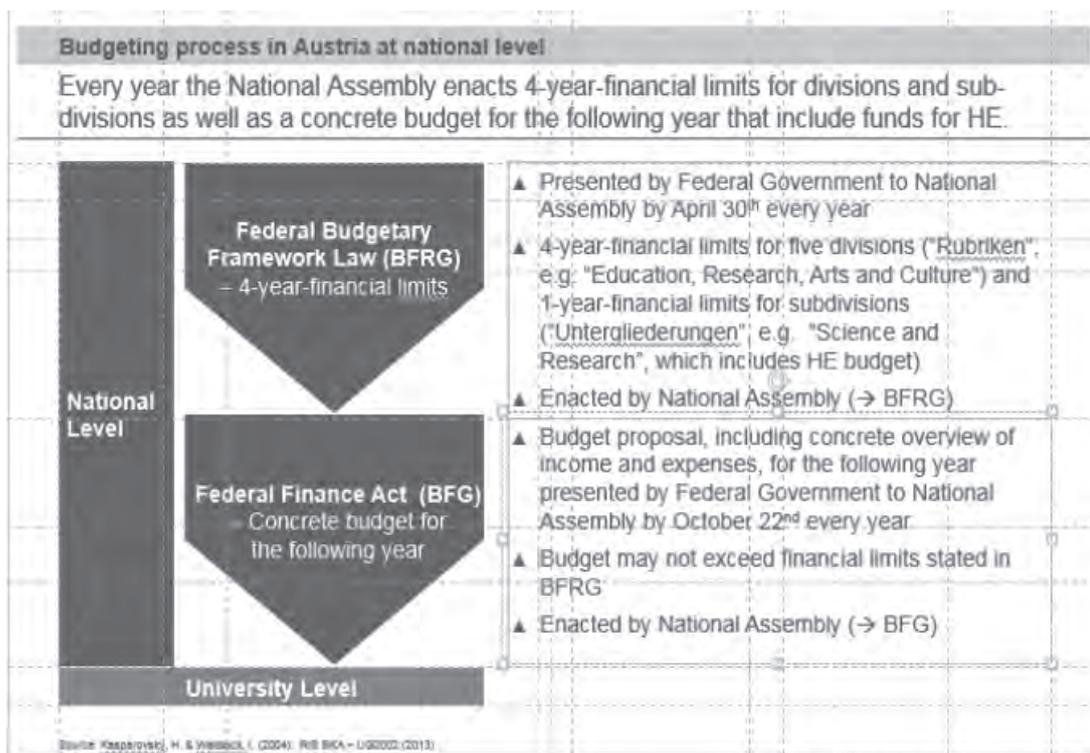
### Overview of funding process of HEIs in Austria

Universities' budget is affected by the Federal Budget, negotiated and determined with the Minister for Science and Research and influenced by previous performance.



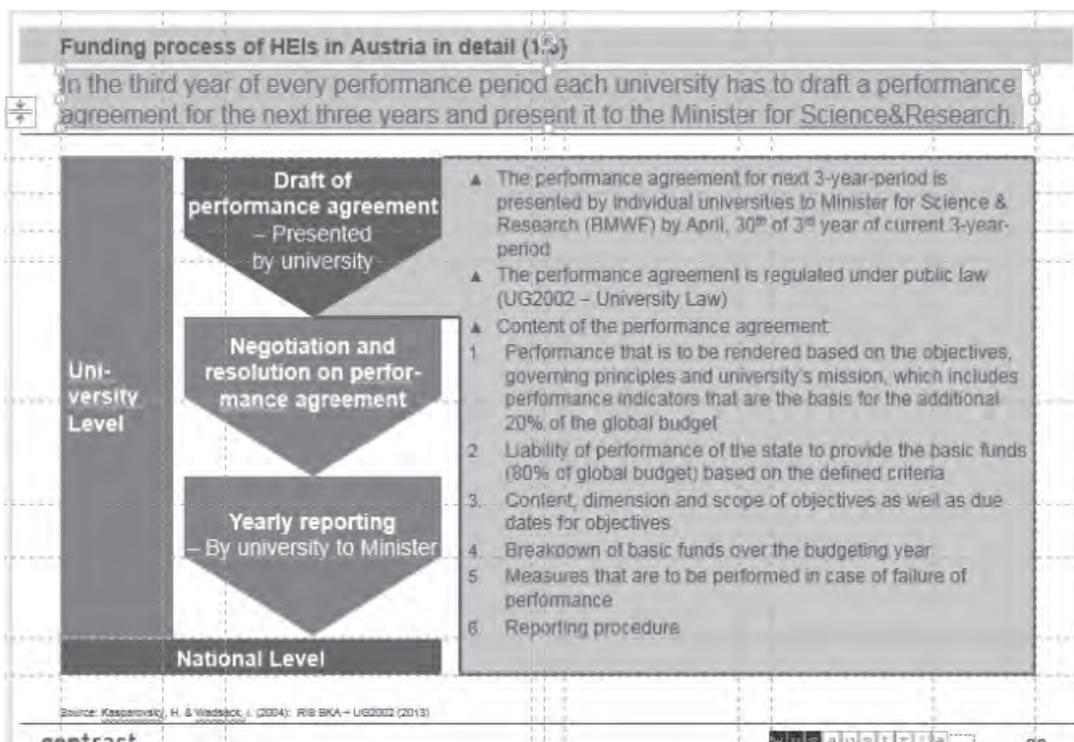
### Budgeting process in Austria at national level

Every year the National Assembly enacts 4-year-financial limits for divisions and sub-divisions as well as a concrete budget for the following year that include funds for HE.



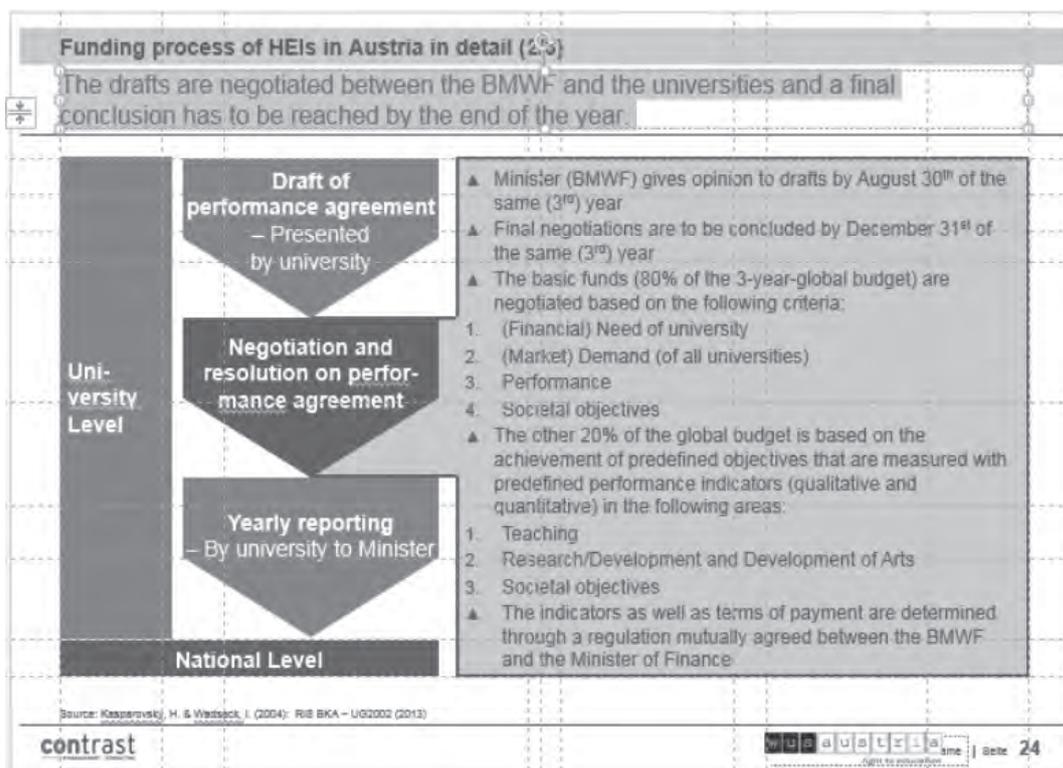
### Funding process of HEIs in Austria in detail (1/3)

In the third year of every performance period each university has to draft a performance agreement for the next three years and present it to the Minister for Science&Research.



### Funding process of HEIs in Austria in detail (2/3)

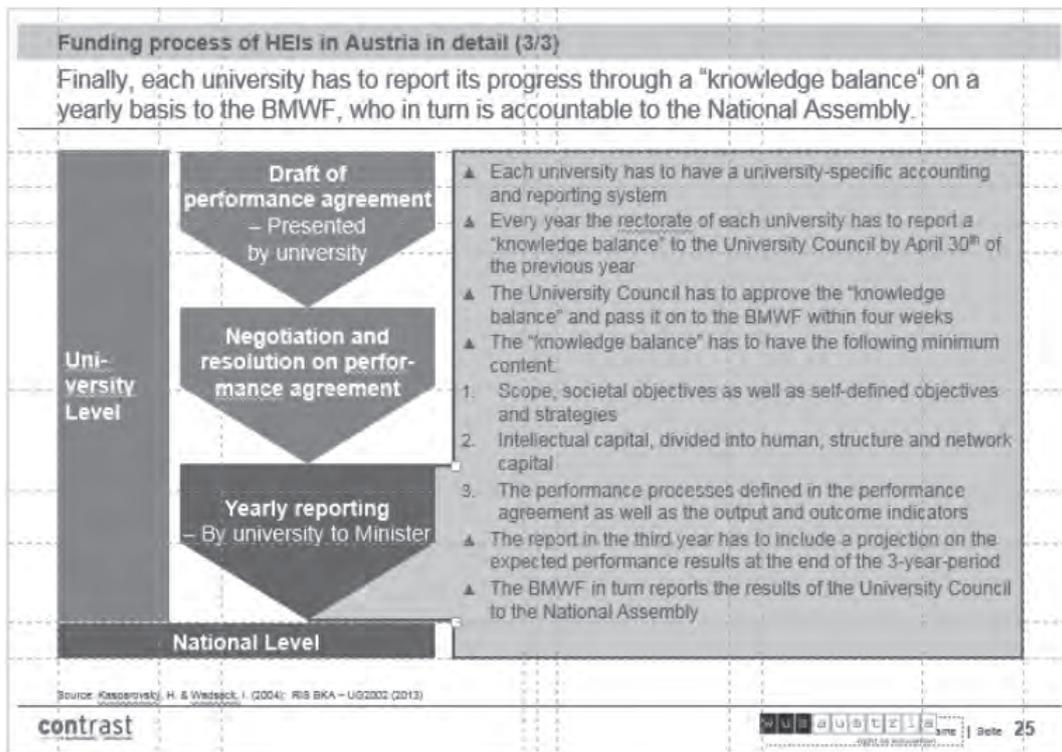
The drafts are negotiated between the BMWF and the universities and a final conclusion has to be reached by the end of the year.





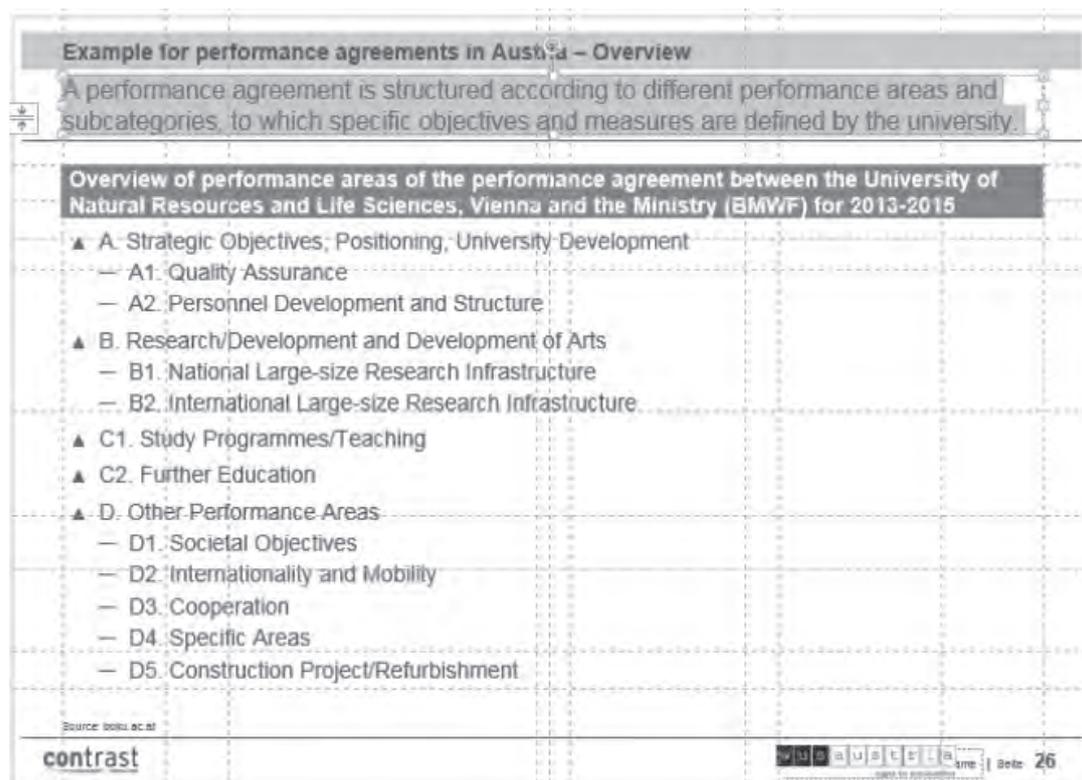
### Funding process of HEIs in Austria in detail (3/3)

Finally, each university has to report its progress through a “knowledge balance” on a yearly basis to the BMWF, who in turn is accountable to the National Assembly.



### Example for performance agreements in Austria – Overview

A performance agreement is structured according to different performance areas and subcategories, to which specific objectives and measures are defined by the university.



### III. CASE STUDIES AND GOOD PRACTICES

This chapter on case studies presents examples from universities in the project in order to foster exchange and transfer of knowledge within the already existing partnerships in GOVERN. The cases come from the EU as well as from Armenia, allowing for a variety of experiences.

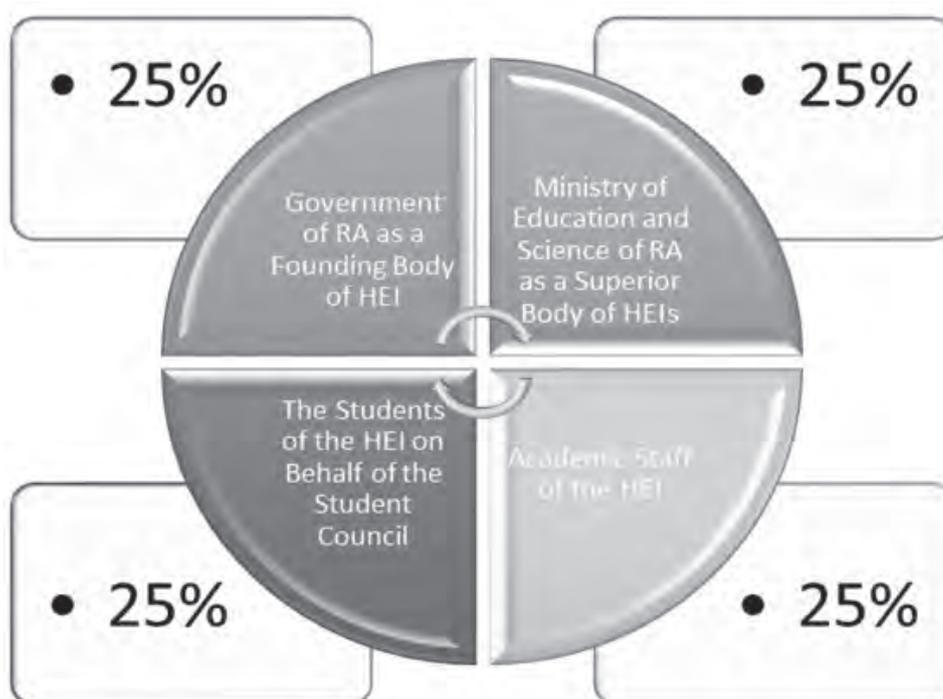
#### STUDENTS' PARTICIPATION IN THE GOVERNMENT OF HIGHER EDUCATION INSTITUTIONS – ARMENIEN CASE

*Author: xxx; contact: xxx*

Being one of the partners of the Govern Tempus project the Armenian National Students' Association (ANSA) believes that there is a need to change the system of students' participation in government of Higher Education Institutions. Being the largest representative of Armenian students, ANSA has distinguished the main problems that students and their representatives face during their participation in HEIs governance.

Thus, the current situation shows that the most common model of students' participation in the HEIs government bodies is that the members of Student Councils represent students' voice and their rights with 25 percent of votes in the boards at different levels. This model may raise some questions that remain without an answer till today.

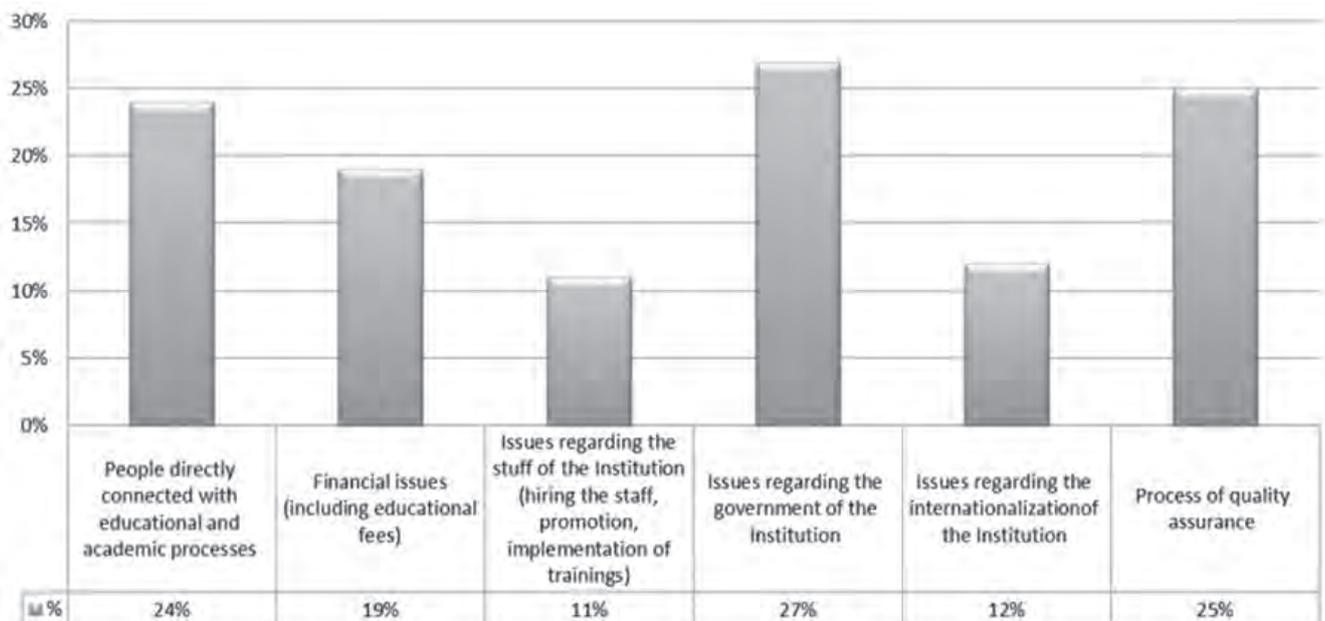
One of these questions is whether the optimal amount of voting right is 25 percent. There are some European models in which students have more or less voting rights and we still need to find out which model is best for Armenian HE system, but what we certainly understand is that the effectiveness of representations doesn't mainly depend on the number of votes, but the qualifications of the students that are engaged in the government bodies.





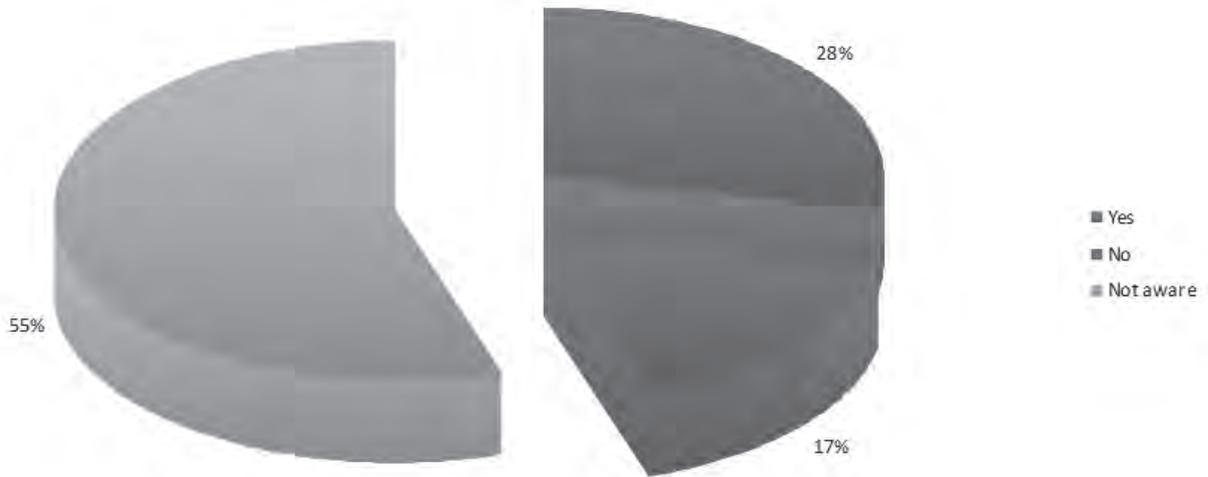
Secondly, we also need to find out whether students are represented at all levels of University governing structure. And being represented does not mean only voting for the decision they are forced to vote or simply hasn't got enough knowledge about the problem to make an efficient decision. Being involved in all levels means that we need to have a students' groups that are skilled enough to represent and really protect students' rights and be involved not only in the decision making process but in the activities that relates to their study programs, curriculum designing etc. This means that there should be also a law that students should be involved in the curriculum and study program-designing process on the chairs and departments level. To show how students are satisfied with the protection of their rights ANSA has done a sociological research amongst 721 students of different universities.

***Government of which field should be under the powers of the students taking part in the government of HEI (a few answers)***

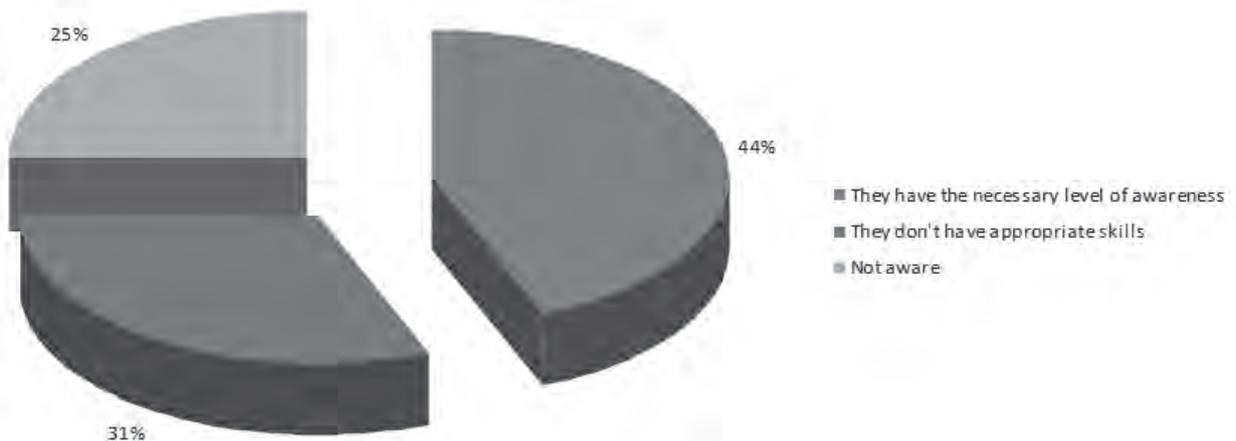


We also need to find out whether those students who are involved in the decision making process do have enough skills to be there, because as our earlier researches show there is a big problem connected with the students' trust to students councils. Most students think that members of student councils are not skilled enough to represent them in the universities' governing boards; there is a need to create new groups of students that have enough motivation and enough knowledge in this specific sphere to represent others.

**Are any proposals made to the superior governing bodies of universities by the students?**



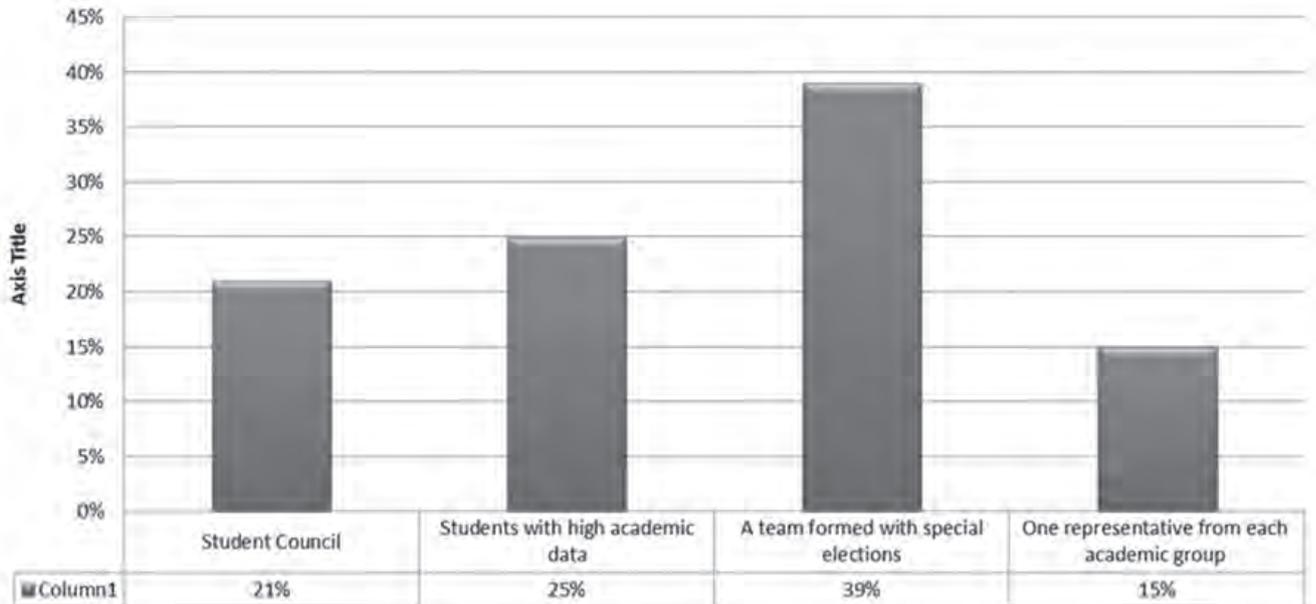
**The students involved in governing bodies of the University: how well are they informed and skilled to protect the students' interests?**



And finally, there are also some statistics according the issue of what type of students should be involved in government of Higher Education Institutions.



## What kind of students should be involved in the governing system of the HEI



## ENSURING QUALITY THROUGH ACADEMIC SUPPORT UNITS

Author: Sharistan Melkonian;  
Contact: [smelkonian@aua.am](mailto:smelkonian@aua.am)

### Background

As part of the American University of Armenia's (AUA) commitment to ensuring quality through evidence-based reflection, stakeholder input and collaborative analysis, academic programs and academic support units engage in regular review and assessment.

AUA's Academic programs engage in student learning assessment through the Annual Student Learning Assessment process as well as through the periodic Academic Program Review process, which comprises a Self-Study, Self-Study Audit and Wrap-Up Meeting. (AUA's Academic Program Review Process: Self-Study and Self-Study Audit Guidelines can be found at <http://iro.aua.am/self-study-guidelines/>)

Academic support units engage in a similar process of review.

At AUA, academic support units include the AUA AGBU Papazian Library, Information and Computer Technologies Services, Office of the Registrar, Office of Admissions, Institutional Research Office, Center for Student Success, and the Alumni and Career Development Office (ACDO). Although these units are not primarily academic or instructional, they greatly contribute to student learning.

Although strategic planning, stakeholder satisfaction surveys, and other evidence-based review have been a part of the university's processes for many years, AUA's academic support units did not have a formal review process until recently. In 2013-2014, in collaboration with the heads of academic support units, Guidelines for Review of Academic Support Units (Guidelines) were developed. The Guidelines can be found at <http://iro.aua.am/files/2012/04/Guidelines-for-Review-of-Academic-Support-Units-FINAL.docx>.

Through the guideline development process, academic support units had an opportunity to review and revise, as appropriate, their unit mission statements and objectives.

### Developing/Revising Mission Statement

Developing a unit's mission statement is a collaborate process with unit staff. This process might involve asking each staff member to review his/her job description and the job descriptions of colleagues, asking staff members to reflect on the most important parts of their jobs and the jobs of other staff members, or a unit director might prepare a draft and circulate it among unit staff for input.

A Mission Statement is a brief statement of what the unit does. A Mission Statement describes:

- the unit's purpose (including responsibilities and clients/customers served)
- how the unit supports the learning environment
- how it interacts with other units

In general, a **Mission Statement:**

- describes the purpose of the unit
- is brief and concise
- is known to employees within the unit, and
- aligns with university's mission



## Objectives

Once an academic support unit has developed or revised its Mission Statement, it then develops **Objectives** which are:

- specific, measurable statements supporting the unit's mission statement by defining what should occur as a result of the unit's core services or functions
- reviewed, updated and/or revised during strategic planning or as necessary (more often than a unit's mission statement) .

Objectives should be:

- specific, clear and concise
- measurable
- challenging, but attainable
- realistic in terms of the number of objectives
- targeted to areas which staff believe can be improved
- related to the services the unit provides, and
- directly under the control of the unit

## Assessment Process

The Guidelines call for each academic support unit to assess one to three objectives each year, focusing on those objectives which can be reviewed in light of available resources and personnel and which are in line with current priorities determined in consultation with the university Administration.

The Office of Assessment and Accreditation is charged with assisting academic support units with this process.

Typically, the process involves:

- identifying objectives,
- identifying evaluation methods,
- assessing the extent to which the unit achieves the stated objectives, and
- providing evidence of improvements based on the analysis of assessment results.



Early in the academic year, academic support units prepare an assessment plan. The plan generally addresses seven areas indicated in the template below.

## Assessment Plan Template

ACADEMIC YEAR Assessment Plan for UNIT
Topic of Investigation <i>Objective(s) to be assessed</i>
Rationale <i>Why is this important to the unit at this time?</i>
Alignment to university and unit mission statement <i>How does this objective align with the university's and unit's mission?</i>
Assessment Timeline <i>What assessment tools (surveys, data, reports, focus groups) will be utilized and when will the review take place?</i>
Description of Assessment Methods: <i>A brief explanation of the tools noted above.</i>
Assessment Team <i>Who will engage in the review process?</i>
Closing the loop Findings will be used to:

Academic support units then collect and analyze the data or information, and report findings. These findings are reviewed within the unit and then sent to the Office of Assessment and Accreditation for further review and discussion. The plans and reports are archived on an internal server and are available to all academic support units.

## Anticipated Timeline

The following is the anticipated timeline for review of academic support units:

- August/September: Unit staff meeting to develop plan (multi-year plans are strongly encouraged)
- October 15: Submit Assessment Plan (shared on internal server)
- June 30: Submit Assessment Report (shared on internal server)

## Challenges

There are, of course, challenges to institutionalizing the review of academic support units. These challenges include lack of sufficient human resources and time as well as prioritization. In addition, although the review often times includes the results of student and other surveys, identifying ways to include meaningful student participation continues to be a challenge.

## Summary

Regular assessment of academic support units is a fundamental part of quality assurance at AUA. Through annual assessment, review is an ongoing process, with evidence-based deci-



sion-making at the core of quality assurance.

While time consuming in nature, the provides academic support units with specific time to focus on continuous improvement while ensuring that regular attention is allocated to important objectives that should be reviewed frequently. More importantly, the process also ensures that academic support units analyze whether or not implemented changes had the intended impact. This is referred to as “closing the loop.”

## References and Resources:

Guidelines for Review of Academic Support Unit: <http://iro.aua.am/files/2012/04/Guidelines-for-Review-of-Academic-Support-Units-FINAL.docx>.

Nichols, Karen W. and James O. Nichols. (2000) The Departmental Guide and Record Book for Student Outcomes Assessment and Institutional Effectiveness. New York: Agathon Press.

Administrative Units Assessment. Emory University. Retrieved from <http://www.oirpe.emory.edu/Assessment/Administrative%20Units%20Assessment.html>.

Support Unit Review. California State University Stanislaus. Retrieved from <http://www.csustan.edu/oaqa/ProgReview/SupportUnitReviewProcess.html>

Process Analysis and Design. University of California Davis Organizational Excellence. retrieved from <http://oe.ucdavis.edu/>

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# DIGITAL ASPECTS OF THE UNIVERSITY MANAGEMENT SYSTEM AND STRATEGY - CASE STUDY: UNIVERSITY OF PALERMO, ITALY

*Author and contact*

## **Overview of HE system in Italy and University of Palermo**

The main principles that build the foundations for the Italian education system, and in particular higher education, are set down in the Italian Constitution that was adopted in 1947. Article 33 of the constitution states that "... art and science are free and the teaching thereof shall be free". As defined by law, the main purpose of higher education, is twofold - to promote scientific progress of the nation and to provide all citizens with education and training that will lead to employment. Italian higher education has a binary system and consists of two main sectors:

- the university sector
- the non-university sector: it includes 4 education typologies with their higher education institutions: higher schools of Arts, higher education in language mediation, higher integrated education (FIS) (e.g. higher technical education, etc.), a specific fields (e.g. diplomatic, archiving, restoration, military studies, etc.)

The non-university sector includes 4 education typologies with their institutions:

- higher schools of design: polytechnics for the arts, academies of fine arts, higher institutes for applied arts, music conservatories and recognised music institutes, higher institutes for musical and choreographic studies, national academies
- higher education in language mediation: higher schools for language mediators
- higher integrated education (FIS): programmes of higher technical education & training (IFTS)
- a few specific fields (e.g. archiving, diplomatics, restoration, military studies, etc.) which, along with their respective institutions, fall under the supervision of ministries other than that of Education.

The entire sector, but especially the university education category, underwent a radical renewal at the end of the 1990s, motivated both by choices of national significance and by the desire to bring the system into line with the European model outlined by the Bologna Process, which Italy has helped to promote from the outset.

In line with this model, Italian university education is today based on three main cycles of study, which are as follows:

### First Cycle (Primo Ciclo)

- Bachelor programme (Corso di Laurea - three years)
- Single-cycle Degree (Corso di Laurea Magistrale a Ciclo Unico - five or six years)

### Second Cycle (Secondo Ciclo)

- Master programme (Corso di Laurea Magistrale - two years)
- 1st Level vocational master (Master Universitario di Primo Livello)

### Third Cycle (Terzo Ciclo)

- Doctorate (Dottorato di Ricerca)

- Specialisation School (Scuola di Specializzazione)
- 2nd Level vocational master (Master Universitario di Secondo Livello)

In the past, the Italian universities were regarded as single organizational units with great autonomy with little coordination and cooperation among them though formally belonging to the state university system. The new Italian comprehensive reform of institutional governance (Law 240/2010 – “Legge Gelmini”) has changed the Italian university system by analyzing the impact on 5 dimensions:

- **External regulations:** typically exercised by the state, top-down authority and is regulated by the directives with the promulgation of legal rules through which the government prescribes detailed behaviours.
- **External guidance:** relies on the setting of general goals and procedural rules, leaving universities space for manoeuvre. These might be agreed by actors outside the university system.
- **Competition:** distribution of scarce resources through competitive processes among and within universities.
- **Academic self-governance:** self-evaluation and control of activity through peer-review.
- **Managerial self-governance:** formal hierarchical leadership positions within universities.

The law Gelmini allows university to have a partial independence by allowing to draw their own statute but at the same time prescribes to follow some guidelines established by the law of Ministry of education. For that reasons nowadays all the Italian universities present the same internal organization that consists in 6 governing bodies: Rector, Academic Senate, Administrative Board, General director, International evaluation unit and Board of auditors).

Anyways the law still remains controversial. It only partially has changed the Italian University System and corrected some inefficiencies, leaving out some important issues as :

- Full autonomy to hire or manage academic staff
- The decision making process is still based in internal consensus building
- Lack of real effective external guidance

There are 95 Universities: 67 State Universities and 28 non State Universities of which 11 are telematic non State Universities. Furthermore, there are 115 institutions for the arts and music sector. Depending on the study programme, students are awarded credits expressed in CFU (*Crediti Formativi Universitari*).

The credit **system** is a systematic way of describing an educational programme by attaching credits to its components. The definition of credits in higher education systems may be based on different parameters, such as student workload, learning outcomes and contact hours. CFU credits are compatible with the European Credit Transfer System (ECTS). The university educational credits system was introduced to facilitate the mobility of students at both national and international level. Credits (CFU) are units that are used to measure the total amount of coursework required from a student, in terms of hours of study and tuition. One credit corresponds to 25 hours of work. An academic year requires a total of 60 credits. Credits are obtained by passing examinations or through other forms of assessment established by each university. They do not count towards the overall mark and are therefore independent of the grade obtained with examinations or assessments of other kinds.

Since the 1980's the University of Palermo structure also have overcome the transformation

and changes towards a better management (unification of Teaching and Research Institutions, just 20 departments and 5 interdisciplinary Ecole or Connection Structure), a reduction of costs and a strength of human capital. About 122 courses (first and second cycle) are yearly offered as well as 44 master and specialization and 23 PhD courses, targeted to the training of specific professional figures, often in cooperation with external institutions and companies - a galaxy which attracted 11,085 first-year students in 2013/2014 academic year.

There is a strong link between UNIPA and the labour market: 3rd students of 1st cycle degree courses and 2nd year students of the 2nd cycle experience practice periods within public or private companies and agencies.

The present governance system of the Palermo University consist of:

- Rector
- University Academic Senate
- Quality Control Presidium
- Joint Committee teachers/students
- Internal Evaluation Nucleus
- The external system of quality control (ANVUR).

### **Digital aspects of the University management system and strategy**

The history and the progress of the UNIPA Information System (IS) has started with the basic programmes that were either built and created inside the University (by University Information Services) or collected as heterogeneous software components acquired from different vendors. The most ancient core is the set of COBOL procedures devoted to didactics-related activities and served for Student Service Office activities.

During the recent years, some important changes have been conducted towards the improvement of the System, such as

- Database integration and interoperability.
- Replacement of the old version of Student Service office functions.
- The updated version of the website as CMS based web portal.

The UNIPA databases are carried onto the oracle machine (a modern IT architecture powered by Oracle solutions for higher education supports student success -and every system, process, and stakeholder at higher education institution), several dedicated servers and full optic connection, which carry:

- UNIPA web portal (<http://portale.unipa.it/>)
- Didactics web portal
- Intranet facilities
- Electronic registry office

The functionalities of the UNIPA web nowadays include: student careers, courses planning, course monitoring, placement, staff info, financial accounting, secretary on-line, webmail. As main storage system, UNIPA uses Cloud which provides for document storage and VM-Ware for virtualization (didactic laboratories are equipped with smart terminals running virtual machines customized for the teacher's needs).

Although there is an on-line system, the registration of student is done through questionnaire compilation and an on-line registration. The students can book the exam only through the Uni-



versity web-portal. After the graduation, the student can see through the on-line register their academic career or the employers might ask to see the records of the student.

## What does the UNIPA Information System?:

1. Students careers Enrolment
  - 1.1. Student Service Office – backend
  - 1.2. Student services – web frontend
2. Didactic planning
3. Didactic monitoring
  - 3.1. On line examinations
  - 3.2. Management of teaching activity
4. Placement
5. Research products repository
6. Staff
  - 6.1. Careers
  - 6.2. Pays
7. Financial accounting
8. Registry office
9. IT services admin
  - 9.1. Wi-fi
  - 9.2. E-mail
  - 9.3. VOIP
  - 9.4. Google community

	Professor

## Future of UNIPA IT System

UNIPA is quite active in projects that promote the modernization of the IT system. One of the examples is:

### “Digitalization & Dematerialization” Project

A project supported by the Italian Government through the support of **AGID (Agency for Digital Italy)** which aims at full dematerialization of the production processes by means of digital technologies with a budget of 2.2. mill. EUR.

#### *Main objectives:*

- Dematerialization of all the processes related to didactics, research, human resources, accounting;
- Implementing an integrated information system for managing the staff and the unified database of human resources;
- Enabling University departments with proper tools for managing financial reports of the expenses in research projects;
- Allowing interoperability with the Ministry’s IS
- Creating a digitalization workflow for the main operating processes related to didactics and research;
- Creating an integrated information system for managing cost accounting with unique source of information.

UNIPA is planning to purchase U-GOV system, which represents comprehensive software platform encompassing all the needs of a modern University Information System.

For the moment, University is putting an accent on the capacity building of staff and more modernization of the services by:

- creating a task force for web maintenance and development;
- making each people in staff responsible for publishing directly each digital outcome of his/her work;
- redesign of the layout for making the thematic paths central
- tuning the search engine
- mobile apps for accessing the services



# GOVERN

FOSTERING AUTONOMY AND ACCOUNTABILITY: DEVELOPMENT OF STATE-OF-THE-ART HE  
MANAGEMENT SYSTEM FOR EFFICIENT CHANGES IN LINE WITH BOLOGNA PRINCIPLES

web-site

[www.govern.am](http://www.govern.am)

e-mail

[govern.mngt@gmail.com](mailto:govern.mngt@gmail.com)

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