TRANSFORMATIONAL LEADERSHIP PROGRAM – SCHOLARSHIPS AND PARTNERSHIPS

Advisory Committee

"Assessing and Understanding the ICT needs of the University of Prishtina"

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Methodology

In order to evaluate the status of the ICT services being provided by the UP, we conducted face-to-face interviews with several professors and also conducted a survey based on questionnaires.

Face-to-Face Interviews

In order to find out more about ICT services, we met and discussed the issues being faced from the viewpoint of professors. We met with two (2) professors from the FIEK-UP[1], the director of the IT department, and the UP Rector.

Rector: The rector stated that having access and/or subscription to electronic libraries would benefit the academic staff and the students.

Professors: From their point of view, the University of Prishtina currently lacks:

- Services that would enable ease of access to academic information, journals, case studies, and other professional libraries. As such, professors are finding difficulties in following the latest trends worldwide. It is also hard or impossible to engage students in any research and development, as proper information is missing.
- Proper ICT infrastructure in the laboratories that could be used for conducting research and simulating desired activities as part of teaching and mentoring.
- Staff support, which complicates usage of current services, including creation and regular updating of teaching material online. All of the professors have a dedicated space under the uni-pr.edu website where they can create academic profiles and post updates and material related to teaching, research, and publications. Unfortunately, this service is only being used partially as there is not enough staff to support professors on using this.
- SEMS problems.

IT Department: With the director of the IT Department, we discussed two main components of the ICT services:

Infrastructure

The IT Department at the University of Pristina is organized in such a manner to provide support and enablement of the services for all the academic units of the University.

This Department ensures internet and intranet connectivity to all the academic units in the UP campus. All the units are connected via fiber connectivity to the main data center, which is managed by the IT department.

[1] See: http://fiek.uni-pr.edu/

Fig. 1. IT Department Organograph

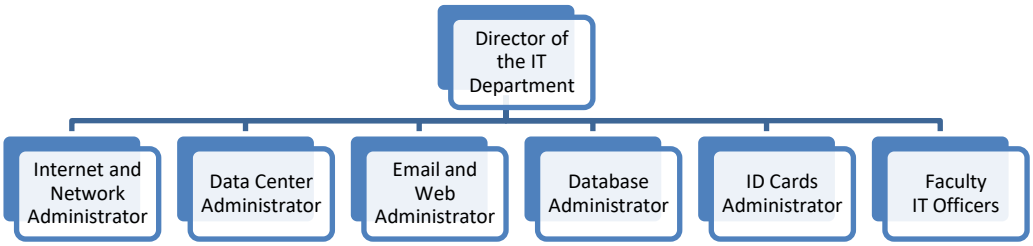
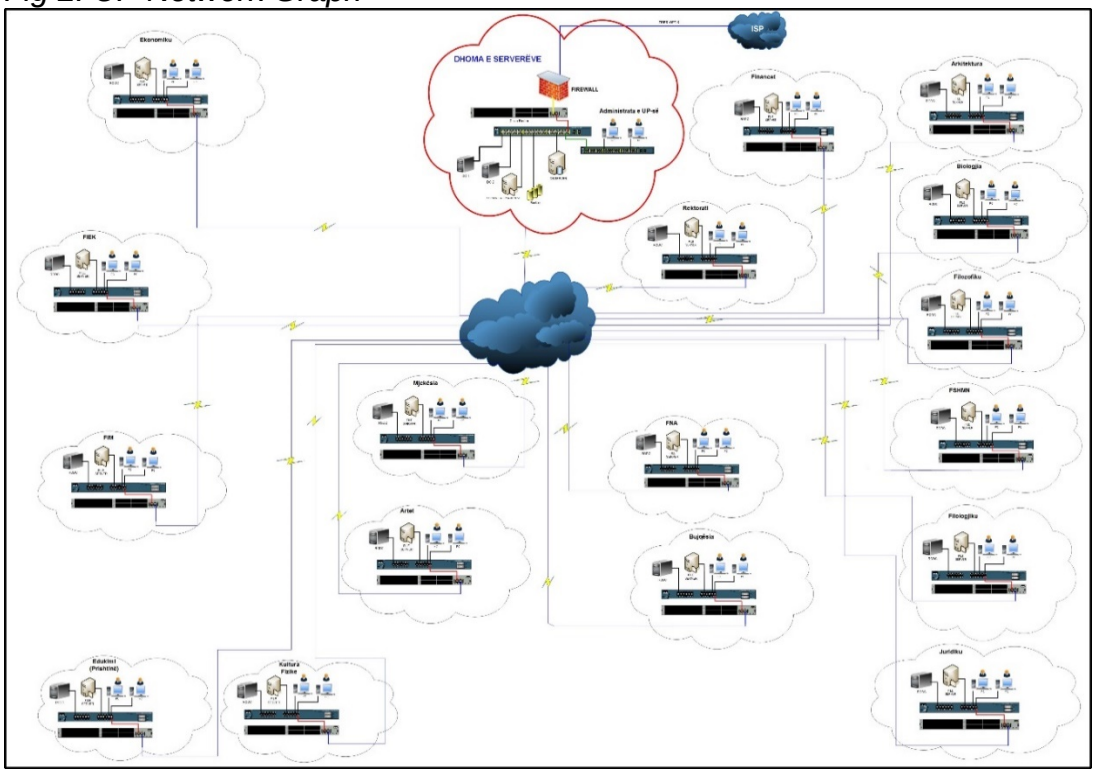
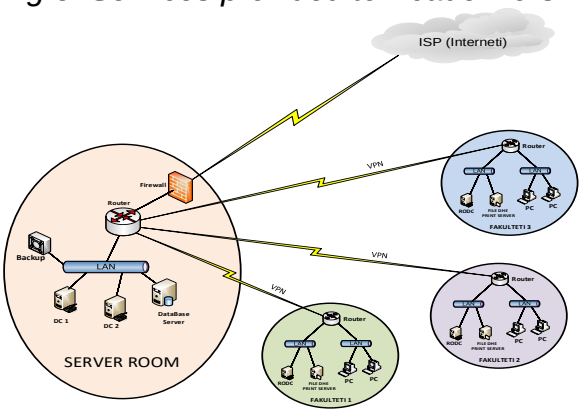


Fig 2. UP Network Graph



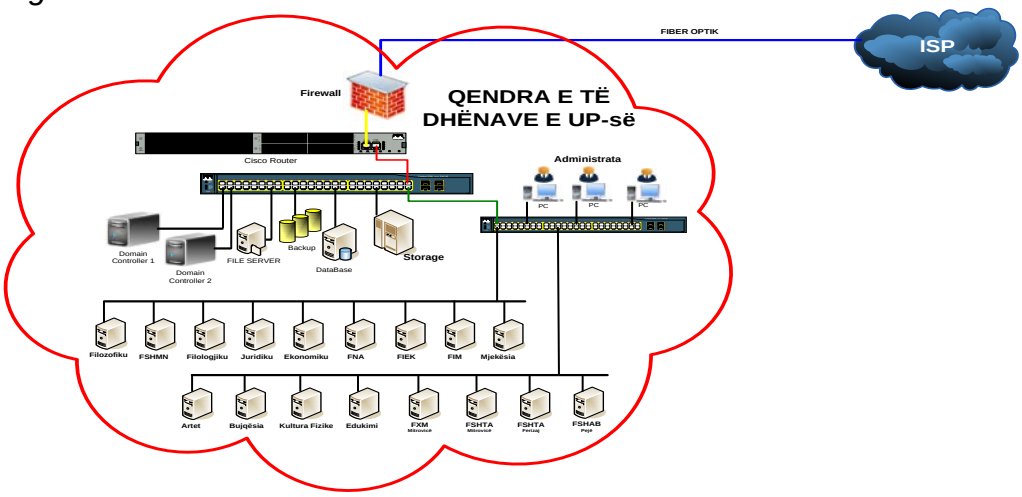
Every academic unit is provided with a file and printing server, which is used to store and access data locally, and with an onsite user authentication server, in order to enable faster domain user authentication and verification without the need to generate additional traffic and delays in communication with the main data center. Therefore, all the academic units are served with solid internet and intranet access.

Fig 3. Services provided to Academic Units



At the main data center there are more than 35 servers, which mainly serve the UP's main application named Students Electronic Management System (SEMS) and provide database and application services to it; servers hosting other applications in use by the UP; data storage; and other communication, processing, and storage services.

Fig. 4. Data Center Services



According to the IT Director, the data center is well equipped as well with a fire suppression system, temperature and water alarms, and remote video surveillance. As such, we believe that the data center is quite well equipped and managed, and it provides the services as required by the UP to meet needs related to data transmission, processing, and storing.

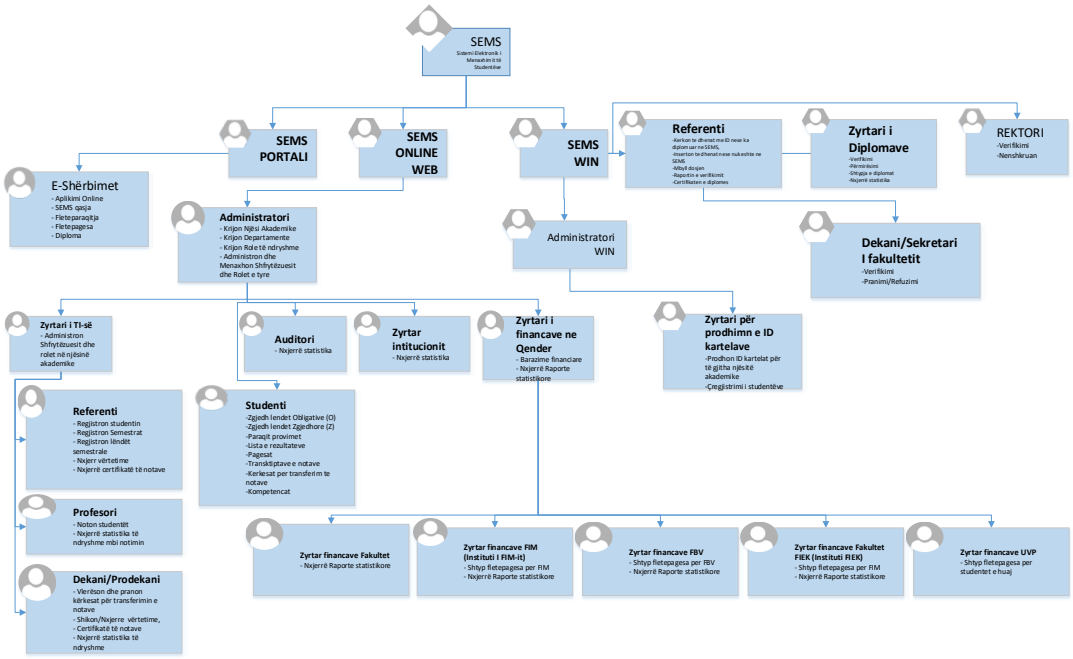
SEMS

Students Electronic Management System (SEMS) has been developed over time by adding additional functionalities and services. It is composed of the:

- SEMS WIN – the Windows-based version of the application, used by the Faculty referents, diploma officials, Dean and/or the secretary, and the Rector in order to register, update, verify, and issue diplomas;
- SEMS Portal – used to provide electronic services such as online application, generation of payment invoices, and exam applications; and
- SEMS Online WEB, used by almost all the relevant stakeholders, as students, academic staff and administrative staff. The services cover a majority of the academic cycle, starting from student registration, course allocation, grading and grade reporting, up to the generation and verification of academic units required for graduation. The cycle excludes information from revenues collected and their reconciliation and, as such, it does not provide as much financial management information.

See the detailed organogram of SEMS below in Figure 5.

Fig. 5. SEMS Organogram



New services being implemented

With the support of donors, the IT department is implementing a new Financial Management System which will provide financial information currently not available through SEMS. It will be interconnected with SEMS and it should provide better insights and detailed information, including but not limited to financial reconciliation, which for the time being is a major issue for UP, as it

cannot verify and/or reconcile all the revenues collected.

Also, another project being considered for implementation, which is currently in the pilot phase, is the Electronic Student Attendance System. It is supposed to register students' and academic professors' attendance, as the Rector's intent is to reach 70% attendance from all the participants in the classes.

Surveys

We decided to conduct a questionnaire in order to include a variety of the parties using ICT services provided by the UP. We used Survey Monkey[2] to conduct this, and the questionnaires were divided for three (3) different audiences:

Fig. 6. List of Questions

Questions for Students	Questions for Lecturers	Questions for Administrators
How would you rate the connectivity to the internet, provided by the UP.	How would you rate the connectivity to the internet, provided by the UP.	How would you rate the connectivity to the internet, provided by the UP.
Do you have access to the computer labs.	Do you use SEMS on a daily basis?	Do you use SEMS on a daily basis?
How many hrs per day do you use an UP computer lab?	How would you rate the usability of the SEMS.	How would you rate the usability of the SEMS.
How many days per week?	How would you rate the easement provided by the usage of the SEMS.	How would you rate the easement provided by the usage of the SEMS.
Do you have access to the computers in the library?	Do you use SEMS as a collaboration tool?	Do you use SEMS as a collaboration tool?
How many hrs per day can students can use a library computer?	Have you used other Learning Management Systems (eg – Blackboard, OnCourse, etc.)	Do you use other communication tools?
How many days per week students can use library computers?	How does SEMS compare?	Which functions do you believe should be provided by SEMS
Are you satisfied with laboratory equipment?	Do you use other communication tools?	Do you use laboratories for testing new services?
What is the main thing that students need for these classes?	Which functions do you believe should be provided by SEMS	Are you satisfied with the ICT equipment provided for teaching by UP ?
Is there any printer or scanner that students can use for their needs inside UP facilities?	Are you involved in any Research & Development Project?	Do you believe that Evaluation System (student feedback) could improve studying quality?
Are you a regular user of the SEMS?	How many of your publications are accessible for teaching?	Do you think that UP should provide Online/Remote learning?
How would you rate SEMS easy usage and its user friendliness?	Do you use laboratories for work and teaching with the students?	Do you or your department provide online tech support for students (SEMS issues, Internet access, Labs, etc)?
Do you think that SEMS is functional collaboration tool?	Are you satisfied with the ICT equipment provided for teaching by UP ?	Do you or your department provide online tech support for faculty staff?
In your opinion, which part of SEMS should be improved?	Do you believe that Evaluation System (student feedback) could improve studying quality?	How do you get requests to modify equipment or software infrastructure in Labs?
Is there any room at UP facilities that students can use 24/7 (Classrooms, work space, projectors, boards that can be used only by students when they have to work on projects)?	Do you have an academic profile published online?	
Do you have access to electronic materials (pdf books)?	Do you think that UP should provide Online/Remote learning?	
How many professors have posted online books that they use to teach their students?		
Do you have access to read journals/magazines?		
Do you have access to read research papers published by your professors?		
Do you have access to read UP research papers and publications?		
Do you use online sources (tutorials) to understand topics of any class?		
Do you use other sources for studying?		
In your opinion what should be additional benefits of student ID card?		
Are you involved in any Research & Development Project?		
Do you believe that Evaluation System (student feedback) could improve studying quality?		
Do you think that UP should provide Online/Remote learning?		

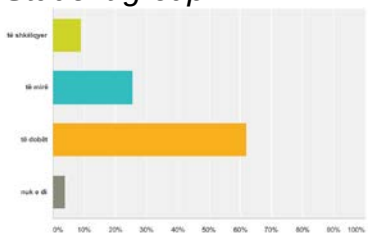
[2] See: www.surveymonkey.com

We received a total of 428 responses from students, 42 from lecturers, and 29 from administrators.

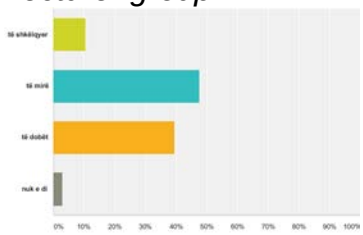
The provided answers were quite interesting and they helped us identify a couple of issues. The complete list of the survey responses can be found under the Annex 1 – Complete Survey responses. Below we will list some, as follows:

Q: How would you rate the connectivity to the internet, provided by the UP?

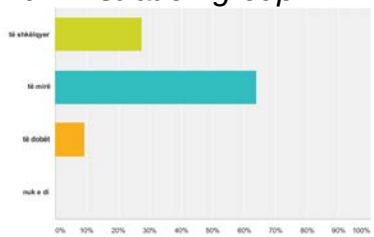
Student group



Lecturer group



Administration group



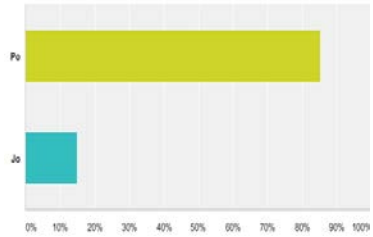
From which we can see that:

- Only 9%, or 38 out of 428 respondents, from the student group;
- Only 10%, or 4 out of 38 respondents, from the lecture group; and
- Only 27%, or 6 out of 22 respondents, from the administration

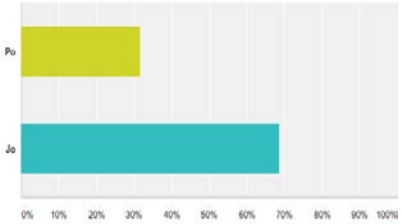
believe that the connectivity provided is good.

Q: Are you a regular user of the SEMS?

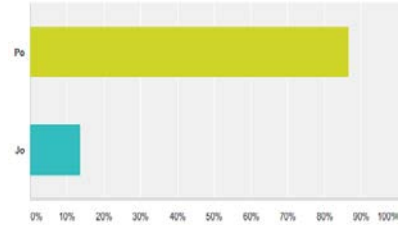
Students group



Lecturer group



Administration group



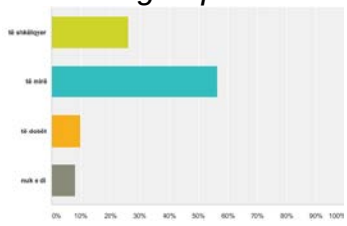
From which we can see that:

- 85%, or 307 out of 360 respondents, from the students group;
- 31%, or 12 out of 38 respondents, from the lecture group; and
- 86%, or 19 out of 22 respondents, from the administration

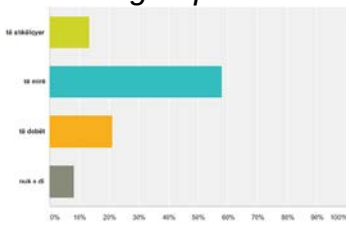
use SEMS on a regular or daily basis.

Q: How would you rate the usability of the SEMS?

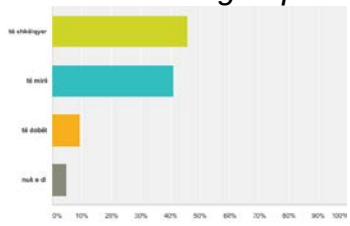
Students group



Lecturer group



Administration group



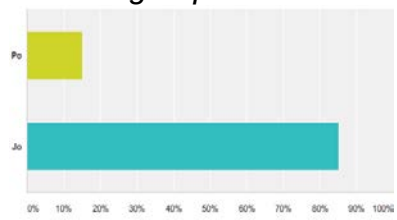
From which we can see that:

- Only 26%, or 94 out of 360 respondents, from the students group;
- Only 13%, or 5 out of 38 respondents, from the lecture group; and
- Only 45%, or 10 out of 22 respondents, from the administration

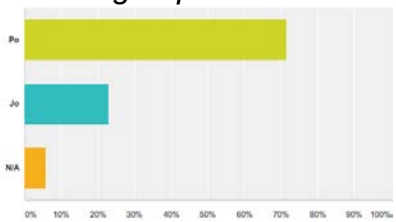
rated SEMS as very good.

Q: Do you use/have access to the computer labs?

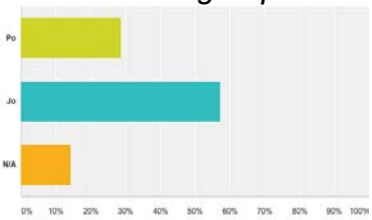
Students group



Lecturer group



Administration group



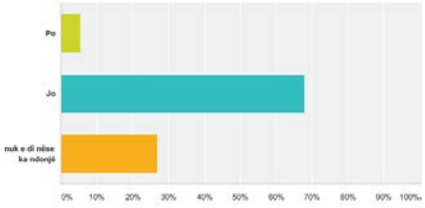
From which we can see that:

- Only 14%, or 64 out of 428 respondents, from the students group;
- 71%, or 25 out of 35 respondents, from the lecture group; and
- Only 28%, or 6 out of 21 respondents, from the administration group

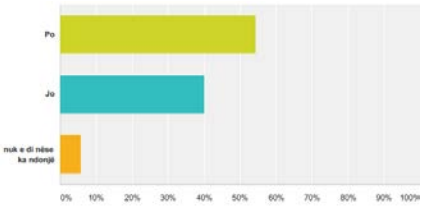
use or have access to the computer labs.

Q: Are you involved in any Research & Development Project?

Students group



Lecture group



Administration group

N/A

From which we can see that:

- An insignificant 5%, or just 17 out of 318 respondents, from the students group;
- 55%, or 19 out of 35 respondents, from the lecture group

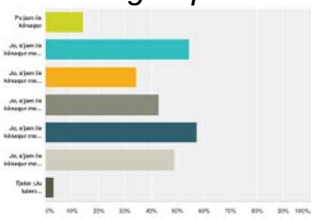
are involved in Research & Development Projects.

Q: Are you satisfied with the ICT equipment provided for teaching by UP?

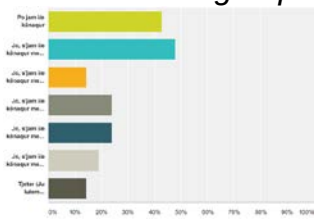
Students group

N/A

Lecturer group



Administration group



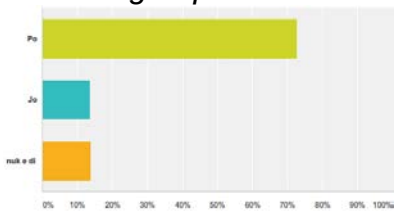
From which we can see that:

- Only 14%, or 5 out of 35 respondents, from the lecture group; and
- 42%, or 9 out of 21 respondents, from the administration group

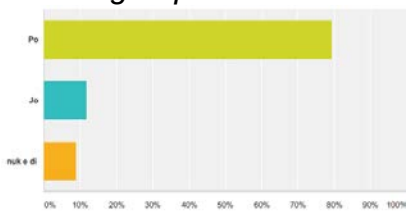
are satisfied with the ICT equipment provided for teaching.

Q: Do you believe that Evaluation System (student feedback) could improve studying quality?

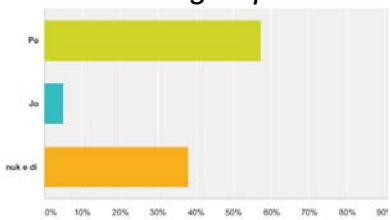
Students group



Lecturer group



Administration group



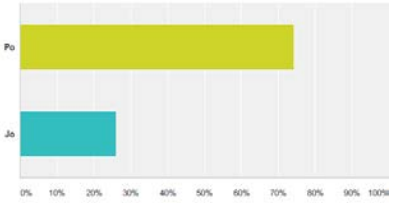
From which we can see that:

- A significant 72%, or 231 out of 318 respondents, from the students group;
- A significant 79%, or 27 out of 34 respondents, from the lecture group; and
- 57%, or 12 out of 21 respondents, from the administration

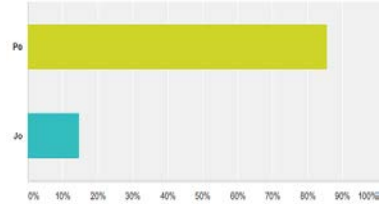
believe that Evaluation System (student feedback) could improve studying quality.

Q: Do you think that UP should provide Online/Remote learning?

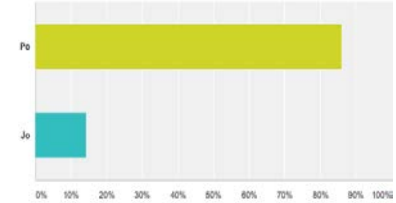
Students group



Lecturer group



Administration group



From which we can see that a majority of the respondents from all three groups believe that UP should provide Online/Remote learning:

- 74%, or 236 out of 318 respondents, from the students group;
- 85%, or 29 out of 34 respondents from the lecture group; and
- 85%, or 18 out of 21 respondents from the administration

Our Opinion and Recommendations

Performance is not how well a system works. Performance is the service perceived by users and stakeholders. Performance optimization is the process of improving information system productivity to the highest possible level without unnecessary additional investment in the ICT infrastructure. From our observations, and after reviewing the results and comments received via survey, as well as from the interviews , we believe that there are several issues that need addressing from the UP management that are directly or indirectly related to Performance Optimization.

A variety of services are being provided by the UP, but their performance could be improved by properly managing capacities, introducing portfolio management, quality management, and other improvements.

Capacity Management

Although the IT Department is well structured, and it covers the backend services provided by the UP, the academic units do not seem to be properly covered. They lack the resources that would provide support and enablement of ICT services at their own units.

Given the strategic importance of ICT and the constant change in technology, capacity and growth planning are essential. This must reflect both long- and short-range planning and must be considered within the budgeting process. Changes in capacity should not only reflect changes in the underlying infrastructure, but also in the number of staff available to support UP. A lack of appropriately qualified staff may delay projects that are critical to the institution or result in not meeting agreed-on service levels. If this is the case, then UP might consider service outsourcing as a solution for growth.

Quality Management

In order to control, measure, and improve its processes, the IT department should introduce Quality Management. Processes in this context are defined as a set of tasks that, when properly performed, produce the desired results. Some of the areas to be covered could include:

- Software development, maintenance, and implementation
- Acquisition of hardware and software
- Day-to-day operations
- Service management
- Security
- General administration

The development and maintenance of **defined** and **documented** processes by the IT department would serve as evidence of effective governance of information resources. Persistence in the observance of processes and related process management techniques is key to the effectiveness and efficiency of the UP. In order to achieve an operational environment that is predictable, measurable, repeatable, and hopefully

certified in the future, a variety of standards could be used for the ICT resources.

Performance Optimization

In effective performance management approaches, measures are not just used for assigning accountabilities or to comply with reporting requirements. They are used to create and facilitate action to improve performance.

Effective performance measurement depends on two key aspects:

- The clear definition of performance goals
- The establishment of effective metrics to monitor achievement of goals

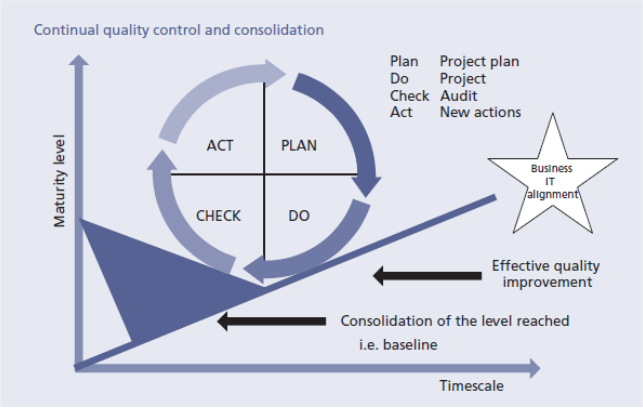
A performance measurement process is also required to help ensure that performance is monitored consistently and reliably.

We must bear in mind that IT is a complex and technical topic. Therefore, it is important to achieve transparency by expressing goals, metrics, and performance reports in language meaningful to the stakeholders so that appropriate actions can be taken.

A variety of improvement and optimization methodologies are available that complement simple, internally developed approaches. These include:

- Continuous improvement methodologies, such as the PDCA cycle (also known as the Deming cycle) an iterative four-step management method used in business for the control and continuous improvement of processes and products. The four key stages of the cycle are Plan, Do, Check, and Act, as shown below.

Fig. 7. PDCA Cycle (ITIL Continual Service Improvement, 2011).



- Comprehensive best practices, such as ITIL. ITIL advocates that IT services are aligned to the needs of the business and support its core processes. It provides guidance to organizations and individuals on how to use IT as a tool to facilitate business change, transformation, and growth (What is ITIL Best Practice, 2011).
- Frameworks, such as COBIT©. It has been developed by ISACA© to support Governance of Enterprise IT by providing a framework to ensure that IT is aligned with the business, IT enables the business and maximizes benefits, IT resources

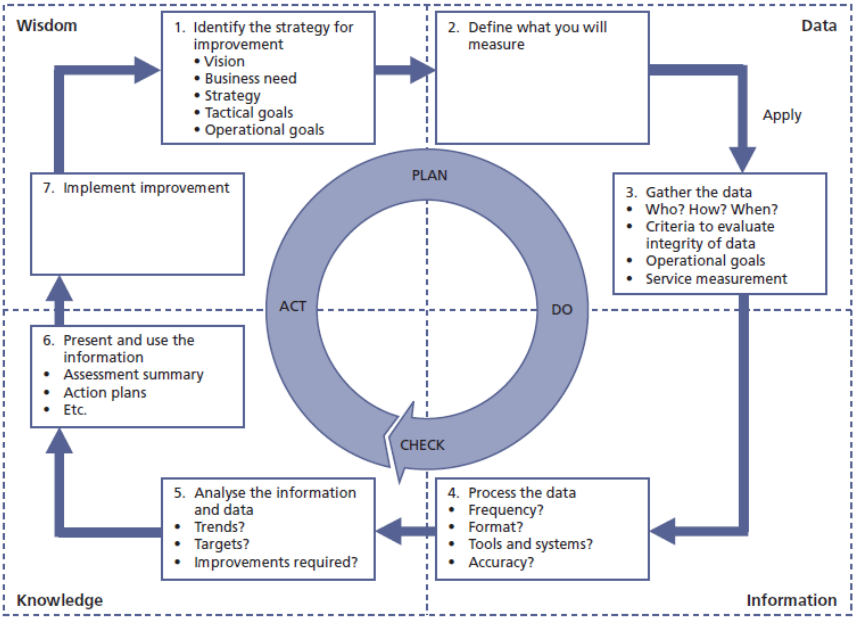
are used responsibly, and IT risks are managed appropriately. It provides tools to assess and measure the performance of 37 possible processes within an organization (COBIT 5, 2015).

Tools and Techniques that facilitate measurement, good communication, and organizational change include:

- Six Sigma
- IT Balanced Scorecard (BSC)
- Key Performance Indicators (KPIs)
- Benchmarking
- Business Process Reengineering (BPR)
- Root cause analysis
- Life cycle cost-benefit analysis

That's why UP needs to monitor and measure in order to properly Validate, Direct, Justify, and Intervene. With this in mind, the PDCA cycle can be expanded to the process known as The Seven Step Improvement Process (ITIL Continual Service Improvement, 2011), as shown below:

Fig. 8. Seven Step Improvement Process (COBIT 5, 2015).



Every organization will have to develop its own measurements. The starting point is the risk assessment, in which the risk that is to be controlled is quantified; implementation of the control should lead to a measurable reduction in the incidence of the events that were classified as risky (or, if the control was in place, then the continuance of its effectiveness should be equally measurable). What you want to establish is whether your risk assessment and control decision was accurate, whether it achieves the objective you set for it and, therefore, whether or not the investment in

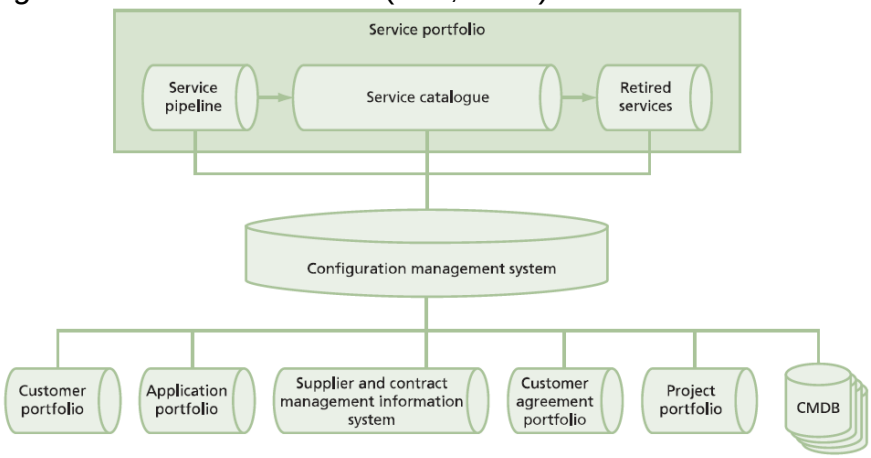
the control makes sense.

Service Portfolio Management

From our observation, we can conclude that the UP provides quite a lot of services; unfortunately, there is not adequate information and communication to all the service users about them.

IT describes a provider's services in terms of business value. It articulates business needs and the provider's response to those needs. It could be used to manage the entire lifecycle of all services provided by UP, as well as those outsourced. According to ITIL (ITIL, 2011), by definition it includes three categories of service: service pipeline (proposed or in development), service catalogue (live or available for development), and retired services. The service portfolio represents the investment made in an organization's services, and also articulates the value that services help it to realize.

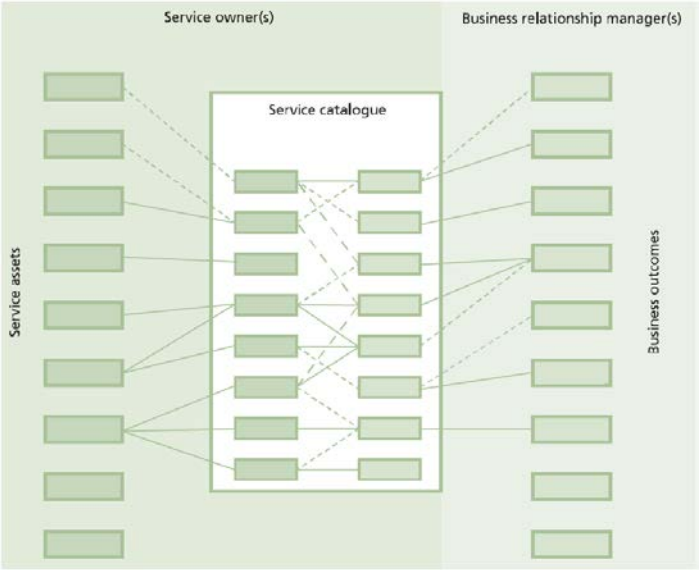
Fig. 9.The Service Portfolio (ITIL, 2011)



It ensures that the right mix of services exists in order to balance the investment in IT with the ability to meet business outcomes. It ensures that services are clearly defined and linked to the achievement of business outcomes, thus ensuring that all design, transition, and operation activities are aligned to the value of the services. It also helps to control which services are offered, under what conditions, and what would be the acceptable risk.

All of that can be supported by a service catalogue that is a database or structured document with information about all live IT services. It includes information about deliverables, prices, contact points, ordering, and request processes. (ITIL, 2011)

Fig. 10. Service Catalogue (ITIL, 2011)



All the services being provided lack proper support or intent from the UP management. As such, they cannot be standardized in order to properly provide the support they need. Also there seems to be a lack of internal policies, procedures, or any similar internal legislation or regulation that would clearly define the purpose of the services and the means of their usage.

Governance Model

We have chosen 'The ISACA© Governance Model' to propose as a suitable and possible solution to be implemented by the University of Pristina (UP), as its model ensures greater alignment of IT functionality with business needs. We will address its importance in successful implementation. The UP will benefit, and later on could be used as a model for other institutions, no matter whether they are academic, privately held, or governmental. The UP could also benefit from implementing this model instead of ad-hoc methods for strategic alignment, risk management, value delivery, resource management, and performance measurement to meet business needs.

Because of its complexity, we will also assess and address ISACA's COBIT© framework, which is used for the governance and management of enterprise IT; ISACA's IT Governance Institute©, which focuses on IT governance and its related topics; and how to improve the IT governance by performing an IS Audit that will provide practical recommendations to improve or leverage their IT environment. ISO/IEC standards will also be discussed and their direct or indirect impact on ISACA's Governance Model©. Last but not least, we will compare and discuss how to integrate multiple frameworks, standards, and good practices on achieving the desired results.

The outcomes from this paper can be used to introduce and implement ISACA's Governance Model© in UP. Methods of introduction, knowledge transfer, and implementation will also be addressed.

The ISACA© Governance Model

IT Governance is a management-backed initiative that will implement a structured framework that will allow management to strategically align, measure, and manage IT resources in a way that will increase their visibility and value to the business, to reduce risk and provide a means of continual improvement. It requires strong management support in order to be successful.

ISACA© Model

"ISACA© is an independent, nonprofit, global association. It engages in the development, adoption, and use of globally accepted, industry-leading knowledge and practices for information systems. Previously known as the Information Systems Audit and Control Association, ISACA© now goes by its acronym only." (About ISACA, 2015) Among other achievements, ISACA© has developed an IT Governance Model that is easy to follow and well-structured. When properly implemented, it will allow the organization to align its IT capabilities with business needs and goals, establish performance objectives, progress measurement, reduce risk, ensure continual improvement, and in general increase the value of IT in the organization. According to ISACA©, there are two distinct disciplines, and ISACA's COBIT© 5 framework defines and divides these two disciplines as follows:

> ***"Governance****: ensures that stakeholder needs, conditions, and options are*

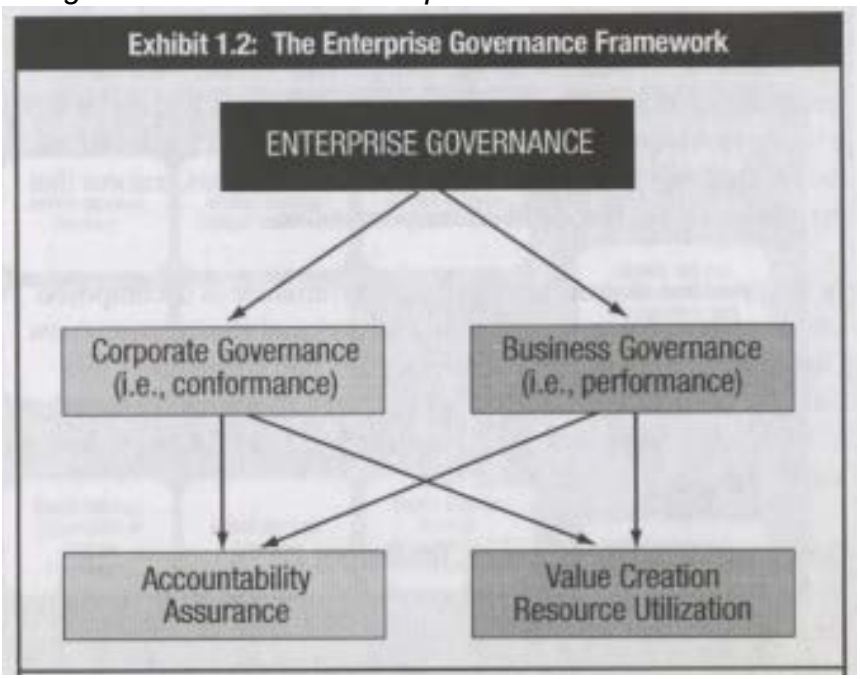
evaluated to determine balanced, agreed-on organization objectives to be achieved, by setting direction through prioritization and decision-making, and monitoring performance and compliance against agreed on direction and objectives.

***Management**: plans, builds, runs, and monitors activities in alignment with the direction set by the governance body to achieve the enterprise objectives." (ISACA, 2015).*

Therefore, ISACA© has developed Governance of Enterprise IT - GEIT© that deals with all the matters related to the Governance of Enterprise IT, which is mainly used by directors and/or executive management (or other governing entities) to control, maintain, and supervise IT resources on behalf of the organization. It provides best practices to ensure that the organization's IT support the business objectives.
According to ISACA© (ISACA, CGEIT Review Manual 2015, 2015), there are five domains in the Governance of IT job practice, and they are as follows:

Framework for the Governance of Enterprise IT
Four key concepts directly relate to this domain, and according to ISACA© (ISACA, CGEIT Review Manual 2015, 2015), they are: "Business Governance (performance); Corporate Governance (conformance); Enterprise Governance; and Governance of Key Assets". This is illustrated in Figure 10 - The Enterprise Governance Framework (ISACA, CGEIT Review Manual 2015, 2015)

Fig. 11. The Enterprise Governance Framework, CGEIT Review Manual 2015®, ISACA. All rights reserved. Used with permission.



In order to understand and properly implement IT Governance, we must be familiar with the industry practices, standards, and frameworks related to IT Governance. Some of them are: COBIT©, that is the ISACA© business framework for the governance and management of IT (discussed in more detail later in this paper); Capability Maturity Model Integration (CMMI); the International Organization for Standardization (ISO), with standards like ISO 38500 that is the standard for corporate governance of IT, ISO 27001 that is standard for information Security, ISO 31000 that is standard for Risk Management, ISO 22301 that is the standard for Business Continuity Management, and many others. IT Infrastructure Library (ITIL) provides the best recommendations on Service Management, and what is most important is it is not proprietary. It is worth mentioning also Project Management Body of Knowledge (PMBOK) and Projects In Controlled Environments (PRINCE), and naturally I must list ISACA's Risk IT and Val IT. These are some of the best practices, standards, and frameworks in order to effectively govern IT.

Risk Optimization

According to (ISACA Journal, 2013), "We set expectations by holding a kickoff meeting with the application owner and Information Systems administrator. During these meetings, data type, data classification, and infrastructure information supporting the systems is collected." They also suggest that a Self-Assessment Risk should be performed, but again it all depends on the environment in which the business operates and the knowledge and expertise of the organization's employees. That leads us to the next principle.

Resource Optimization

Methods used to record and monitor IT resource utilization and availability must be implemented and maintained. IT resource performance must be evaluated and reported on a regular basis. Processes for information, application, system, and/or infrastructure acquisition should be considered.

Service Level Management concepts should also be considered and implemented whenever possible. IT Service Lifecycle as defined by IT Information Library (ITIL) can be implemented; that includes Service Strategy, Service Design, Service Transition, Service Operation, and Continuous Service Improvement. ISO 27000 Standard on Information Service Management System, or even ISACA's proprietary IT Val Framework, that is also included in the COBIT© 5 publication, can be implemented for Service Level Management.

ISACA COBIT

COBIT© provides good practices across a domain and process framework and presents activities in a manageable and logical structure. COBIT's good practices represent the consensus of experts. They are strongly focused—more on control, less on execution. These practices will help optimize IT-enabled investments, ensure service delivery and provide a measure to judge against when things do go wrong. COBIT© 5 is an internationally accepted business GEIT© framework from ISACA©

that was developed by, and for, practitioners. It includes insights from IT and general management literature. COBIT© 5 is based on five principles that are illustrated below (COBIT 5, 2015).

Fig. 12. COBIT 5 Principles - COBIT 5 2015®, ISACA.
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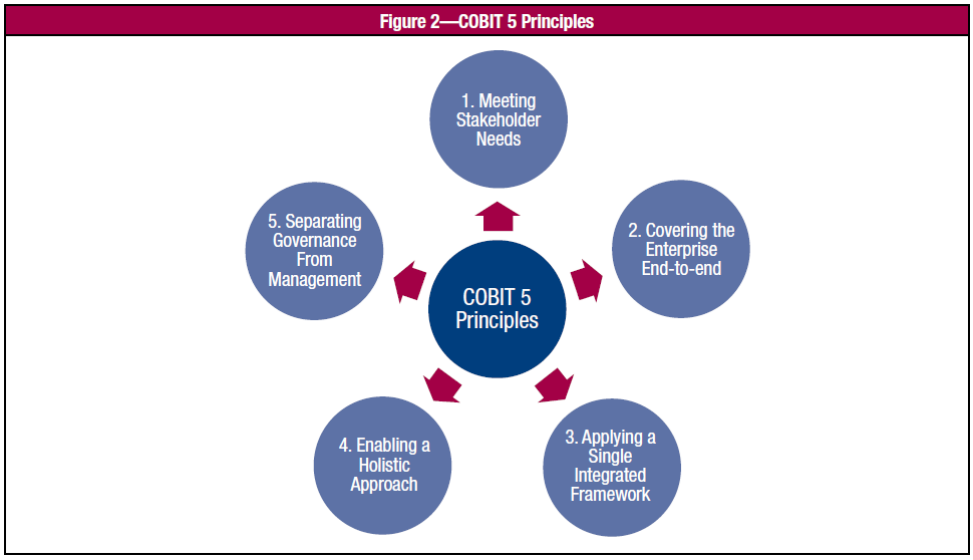
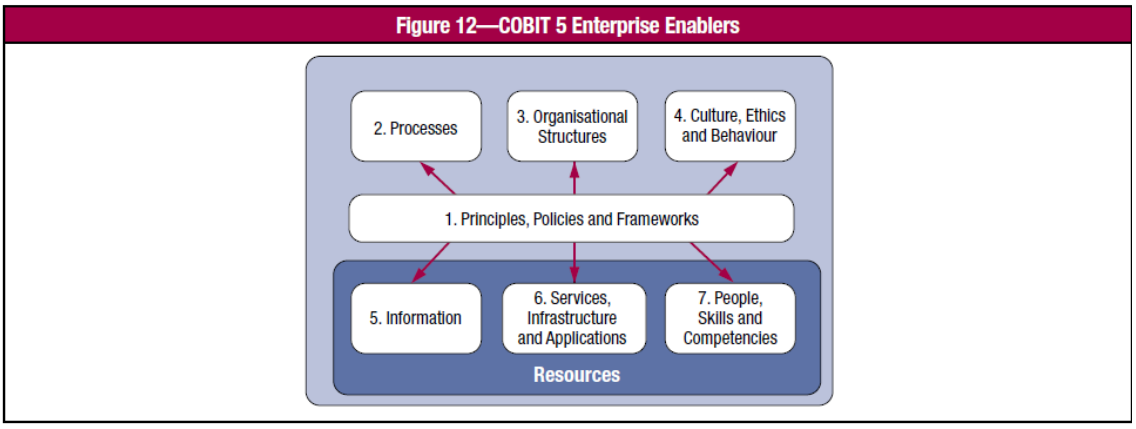


According to (COBIT 5, 2015), they are:

- Meeting Stakeholders' Needs: that relates to the Value Creation objective, which can be achieved by realizing benefits, optimizing risk, and optimizing resources.
- Covering the Enterprise End to End: the principle where enablers are introduced. They are end-to-end enterprise-wide elements that include everything and everyone, whether internal or external. They are included if there is a relevance between IT and enterprise information. Governance Enablers, Governance Scope and Roles, Activities and Relationship are the main elements of this principle.
- Applying a single integrated framework: because COBIT© 5 incorporates all other relevant frameworks and standards, it can be used as a single framework to implement IT Governance.
- Enabling a holistic approach: the principle where seven categories of enablers are introduced and shown below(COBIT 5, 2015).

Fig. 13. COBIT 5 Enterprise Enablers - COBIT 5 2015®, ISACA. All rights reserved. Used with permission



They are driven and defined by higher level IT-related goals, in a goals cascade model.

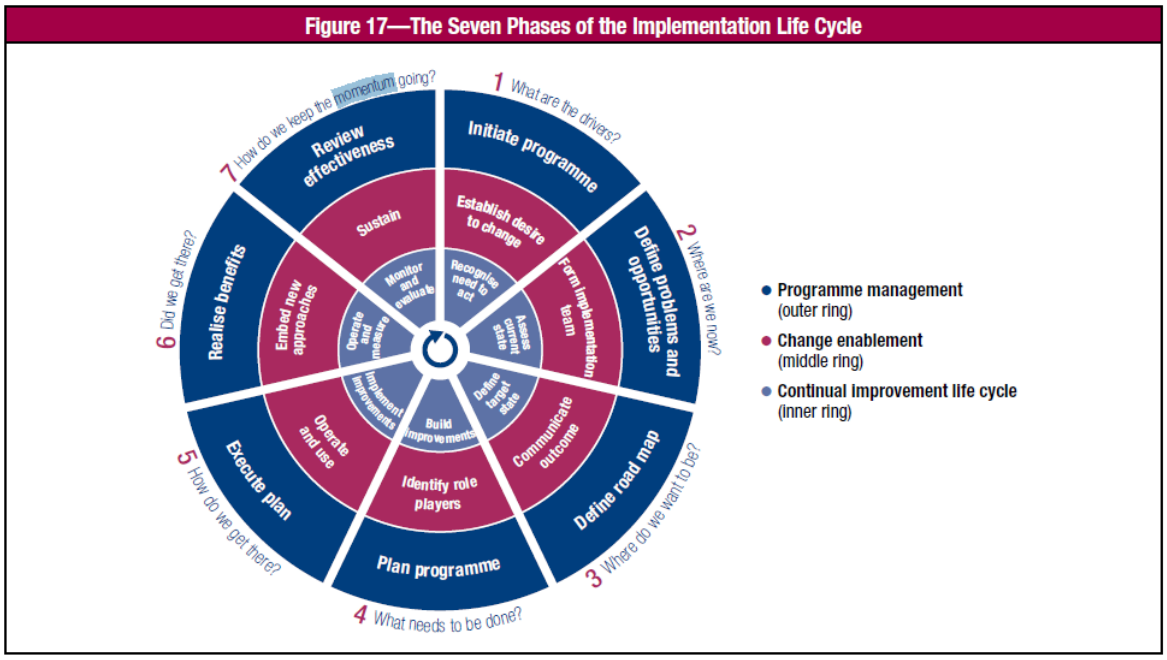
- Separating Governance from Management: makes a clear distinction between governance and management, as described earlier. It also shows the interaction that must occur between governance and management. Although they perform a different set of activities, an interaction between these two must exist.

In order to achieve organization-wide IT Governance, both board and executive management must exercise a set of practices and responsibilities with a goal of providing strategic direction to ensure that objectives are achieved, making certain that risks are managed properly, and verifying that the organization resources are used responsibly.

Challenges to be faced

How do we keep momentum going? Or maybe I should have said: How do we initiate the momentum? In order to initiate the process of introduction and implementation of IT Governance, I would recommend that we use the "A Life Cycle Approach" (COBIT 5, 2015), apart from the model Seven Step model introduced above, that has been illustrated in Figure 13 - The Seven Phases of the Implementation Life Cycle(COBIT 5, 2015).

Fig. 14. The Seven Phases of the Implementation Life Cycle - COBIT 5 2015®, ISACA. All rights reserved. Used with permission.



Conclusion

The University of Pristina has invested quite a lot mainly in its infrastructure, hardware, and software, in order to enable services to its users and stakeholders that are students, academic lecturers, and administrative staff. However, based on the survey results the users are not fully aware of the existing services and benefits provided, and therefore not satisfied. Some of the improvements to be considered are as follows:

- Improve access to information: journals, publications, study materials etc.
- Improve study facilities for the students, as well as R&D labs
- Improve services provided by SEMS and their functionality
- Conduct regular student feedback through an evaluation system
- Develop distance learning programs

We believe that by taking into consideration the above-mentioned recommendations, the UP will orient itself into properly governing and managing the services, with the aim of improving both the learning and teaching process.

Bibliography

About ISACA. (2015, April 14). Retrieved from ISACA: http://www.isaca.org/about-isaca/Pages/default.aspx

COBIT 5. (2015, April 14). Rolling Meadows: ISACA. Retrieved from ISACA - COBIT Publications.

FIEK. (n.d.). Retrieved from FIEK: http://fiek.uni-pr.edu/

ISACA. (2015). *CGEIT Review Manual 2015.* Rolling Meadows: ISACA.

ISACA. (2015). Governance of Enterprise IT. In *CISA Review Manual 2015* (pp. 79-80). Rolling Meadows: ISACA.

ISACA Journal. (2013). Governance, Risk and Compliance - Trying it all together. *ISACA Journal, v2*, 30-31.

ITIL. (2011). *Service Strategy.* Axelos.

ITIL Continual Service Improvement. (2011). Best Management Practices.

Shabani, I. (n.d.).

Survey Monkey. (n.d.). Retrieved from Survey Monkey: www.surveymonkey.com

What is ITIL Best Practice. (2011). Retrieved from Axelos: https://www.axelos.com/best-practice-solutions/itil/what-is-itil

Appendix 1 – Granted Permission

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March 6, 2017

Elvin Mala
Advisory Committee for the Transformational Leadership Program
Sent via email to elvinmala@gmail.com

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