# Information Technology Governance for Tunisian Universities (ITG4TU)

*561614-EPP-1-2015-1-ES-EPPKA2-CBHE-JP*


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# IT Governance Framework: Manouba University

*ITG4TU CONSORTIUM*

## *AMENDMENT HISTORY*

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| 1 | 0 | 18 Sept 2017 | Ricardo Colomo | Initial Version |
| 1 | 1 | 28 Sept 2017 | Beatriz Gómez | Editing Modification |
| 2 | 0 | 28 Nov 2017 | Youssef BEN HALIMA | New Version |
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# 1. Background

ITG4TU project is aimed to gather a set of researchers from four European universities with a wide experience in developing and deploying IT Governance framework models from three different countries (Spain, Germany and Norway) to develop, adapt and test a new IT governance framework to be implemented in several Universities in Tunisia. Therefore, the expected results of this project include a new governance model for IT in Tunisian HEIs as well as an overall modernization of the governance processes, related to IT, for HEIs and a contribution of the cooperation between EU and Tunisia. One of the main results of this project is the design and later implementation of a specific framework for each of the Tunisian universities part of the consortium. This document is intended to describe one of this framework, more specifically the one for Mannouba University.

Problems in IT Governance (ITG) are not particular of a given country or continent. Taking this into account, IT Governance artefacts can be common to almost all country in the world. However, special needs in the deployment are purely local (i.e. dependent on the University teaching portfolio, the ownership of the HEI, the level of knowledge on the topic, the local governance rules, the governance culture, etc.). This leads to the fact that already implemented approaches in ITG for Universities can be used as inspiration for a "Global" Tunisian initiative. However, this cannot be done without the active participation and competence of Program Countries. In other words, previous success case studies and current competence on the topic will lead to a better ITG setup. This active participation cannot be reached without European cooperation. To reach this aim, specific objectives of the project were categorized as follows:

- Phase 1: Perform specialized training modules for building ITG models in Tunisian universities (already completed). This training targeted three types of stakeholders of universities: professors, students and administrators/managers. Professors were trained in two ways, those professors who wished to acquire new knowledge to include ITG as a teaching and research discipline. Regarding, graduate students from related studies of IT and even in Management/Business Administration could acquire new skills to ensure their further professional or academic integration. Of course, the main target of this project was the intermediate management and board executives of universities, as well as functional IT departments that could take this opportunity to better align their IT strategies and are able to support this project.
- Phase 2: Build ITG frameworks, adaptable to each institution, for the participants of the project. As a result of the aforementioned training in ITG, Tunisian universities in collaboration with EU must be able to implement their own ITG framework and their corresponding instruments of ITG. In order to know every Tunisian university reality, European partners visit each institution and assess their individual IT governance situation.



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- Phase 3: Perform training to employers in IT sector, mainly mid-size and large companies both public and private. ITG has been shown as a facilitator to produce higher ROI of enterprises, coming from further development of IT assets. This training will result in a greater connection between Tunisian universities and the surrounding economic and social stakeholders. It will also provide project sustainability, since once Tunisian trainers (professors) of local universities were accredited, they may continue providing specific training to local businesses.

The purpose of this document is to present the ITG framework tailored to the needs of Manouba University.

# 2. IT Governance framework development roadmap

In a previous document (Governance-framework-development) consortium defined a set of steps to develop the ITG framework tailored to the specific needs to the four universities participating as partner countries:

1. Define and validate a ITG Framework: structures (people), the strategic alignment artifacts (processes, procedures, best practices…) and the communication issues, necessary to assure a good governance of IT. **(Activity 2.5. Governance framework development)**
2. Design and validate an ITG Maturity Model based on this ITG Framework. This tool will be useful to establish the current ITG maturity of each university, select the goal maturity level and describe the best practices that each university must implement to achieve it. **(Activity 2.5. Governance framework development)**
3. Evaluate the current ITG maturity level through the previous analysis of the best practices and propose a future maturity level. **(Activity 2.5. Governance framework development)**
4. Design an improvement ITG plan based on the best practices to achieve the ITG maturity level proposed for each university. Specify how the creation of such structures will be done, which kind of alignment activities will be performed and what documentation to communicate that will be required. **(Activity 2.5. Governance framework development):**
5. Assess, by the European partners, of the proposed plan and the viability of the activities. **(Activity 2.6. Governance framework assessment)**
6. Implement, by the Tunisian partners, the approved plan including the recommendations if any. **(Activity 4.5. Governance framework deployment)**
7. Follow-up, by the European partners, on the evolution of the plan. **(Activity 4.6. Governance framework monitoring)**

In this document, it is intended to develop the first four points in the previous list adapting the discourse to the needs of Manouba University.

However, given the interactive nature of the process, in this document partners adopted an approach that presents some adherence with the real steps to be taken in order to provide a



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better view of the process. In order to do so, in what follows, the following aspects are analyzed. Firstly, and regarding the partner producing this document, the environment of the ITG framework will be described. This includes the description of the main international efforts for ITG in universities, the international frameworks studied and as the last factor, the description of the composition of the ITG Group inside the organization. The second aspect is the description of the evaluation of the ITG best practices and their assessment inside the organization. In third term, one can find ITG maturity model including the adaptations on the IT Governance Framework maturity model that must be developed, the review of the adaptation of the maturity model to your organization to be done by program partners and finally, the maturity goal selection. The last part of the framework is the definition of the deployment plan including main steps, dates, responsible and key performance indicators.

# 3. IT Governance environment

Before the definition of the framework in terms of best practices and the adopted, maturity model, there is a need to define common tasks related to the development of such artefacts. In what follows, the descriptions of several tasks performed before the development needed in order to provide the infrastructure of the framework are provided.

## 3.1.Study of experiences in other countries

Information Technology (IT) is a very important aspect for higher education institutions (HEI) in both teaching, research and administration. The managers of those intuitions are more and more aware that IT is a strategic tool for their institutions. On the other hand, IT Governance (ITG) is getting attention from the practitioner and research side, given the need to govern IT extending the organisation's strategy and objectives into IT. ITG helps to set clear expectations, to gain participation, open communications, establish accountability and provide executive management oversight. Thus, it is important to consider ITG and the alignment with business strategy for HEI. In this article, authors present a Systematic Literature Review (SLR) on ITG in HEIs using a collection of scientific and non-conventional data (grey literature). The motivation that drives this literature review is the further development of an ITG framework for Tunisian universities. This work aims to define the situation of the ITG in other countries. This work aims to provide a map of the state of the art of IT governance in HEI in various countries. Results show a mixed situation of ITG in HEIs. Some countries have the support of top level management to introduce ITG in HEIs by adopting regulatory frameworks and common laws. But other countries relay in their strong culture of ITG. The different case studies presented in this review show that there is no consensus on the ITG framework or standard to use in HEI. An important number of institutions are implementing COBIT or ISO best practices. In the other hand, some counties have developed their own frameworks. Results show there is no a single way to implement an ITG framework designed for HEI. However, it is also true that there are two mandatory aspects that are necessary to implement in ITG deployments: firstly, establishing a committee structure for IT assets and secondly, enable effective communication between the IT, the business and the stakeholders.



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## 3.2.Study international ITG frameworks

There are many frameworks developed by researchers and industrials, and here some description about them.

### 3.2.1. Cobit

COBIT provides ICT managers, auditors and users (information and communication technologies) with indicators, processes and best practices to help them maximize the benefits of using computer technology and developing governance and control of a company.

It helps them understand their IT systems and determine the level of security and control needed to protect their business, through the development of a governance model for information systems such as COBIT.

It is based on 5 principal keys of governance and IT management:

- Meet the needs of stakeholders;
- Cover the business from end to end;
- Apply a single frame of reference;
- Separate governance and management
- Promote a global approach.

### 3.2.2. The Calder–Moir IT Governance framework

The Calder–Moir IT Governance framework is a Meta model for coordinating frameworks and organizing IT governance providing structure guidance on approaching IT Governance. Using this framework, organization can get maximum benefit from all the other frameworks and standards. It consists of six quadrants. Each of these quadrants represents one step in end to end process which starts with the business strategy and finishes with the operations. The performance being supplied back to business strategy, we can consider the operation as beginning for the new cycle). Each of the quadrants is divided into three layers: inner layer – key issues dealt by board, middle layer – executive management and the outer layer – IT practitioners.

### 3.2.3. ISO/IEC 38500

The purpose of the ISO/IEC 38500 standard is to promote the effective, efficient, and acceptable use of IT in all organizations by:

- Assuring stakeholders (including consumers, shareholders, and employees) that, if the standard is followed, they can have confidence in the organization's corporate governance of IT;
- Informing and guiding directors in governing the use of IT in their organization; and
- Providing a basis for objective evaluation of the corporate governance of IT.

This standard sets out six principles for a good corporate governance of IT:

1. Responsibility.



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2. Strategy.

3. Acquisition.

4. Performance.

5. Conformance.

6. Human Behavior.

The principles express the preferred behavior to guide decision making. The statement of each principle refers to what should happen, but does not prescribe how, when or by whom the principles would be implemented – as these aspects are dependent on the nature of the organization implementing the principles.

Directors should ensure that these principles are applied. Directors should govern IT through three main tasks:

- Evaluating the current and future use of IT.
- Directing the preparation and implementation of plans and policies to ensure that the use of IT is aligned with the business objectives.
- Monitoring the conformance to policies, and performance against the plans.

### 3.2.4. JISC

The first initiative in the design of an IT Governance model, which provides a reference for the whole university system, was that undertaken by the Joint Information Systems Committee (JISC) for universities in the United Kingdom. This committee designed a reference model and a toolkit for the self-evaluation of IT Governance maturity, which has become a starting point in helping universities in the process of identifying and defining the IT role within the planning and governance of their organization.

This framework was designed to be highly flexible and able to be used by different types of university: large or small, old or modern and to take into account the different cultures which prevail in the institutional governing of universities.

### 3.2.5. GTI4U

Using these previous experiences as a starting point, Fernandez developed a University-oriented IT Governance Framework (GTI4U) for the Spanish Association of University Rectors (CRUE in Spanish), published in December 2008, which is based on the JISC model and describes the principles and characteristics of the new international standard ISO 38500. The GTI4U framework is divided into three levels:

- The upper level contains the 6 ISO 38500 principles;
- The middle level includes seventeen IT objectives and their relationship with each of the ISO principles;
- The lower level consists of three types of metrics (maturity indicators, qualitative evidence indicators and quantitative evidence indicators) that will be used to measure whether IT objectives have been fulfilled.



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| | Who design IT | For whom | implementation | Complexity of the framework | Alignment with ISO standard |
|---|---|---|---|---|---|
| **COBIT** | Non university | Global framework except education | Difficult to implement | Very hard to understand | Not aligned |
| **Calder-Moir** | (Alan Calder & Steive Moir) Researchers | Designed for companies | Not extended and not adapted | Quite staightforward | aligned with ISO |
| **JISC** | Designed by UK universities | Universities | Only UK pilot example | Not easy to understand | Not aligned with ISO |
| **GTI4U** | Designed by universities | Universities and education | Easy to implement | Easy to use, implemented in 12 universities | aligned with ISO |
| **ISO 38500** | ISO | Education | No best practices implemented, Only principals | Easy to understand | Yes |

After study the work presented in "An IT Governance Framework for Universities in Spain" the Tunisian partners involved in the project on the adequacy of framework with the Tunisian context after some adaptions.

## 3.3.Description of the ITG Group

The ITG team is composed of the following members

- Jouhaina GHERIB : Professor and Rector of the University
- Sami Faiez : Professor and Director of ISAMM
- Narjes BELLAMINE BEN SAOUD : Professor and Director of ENSI
- Youssef BEN HALIMA : Director of studies and followship and member of ISIMG advisory Board, ITG4TU Manouba Coordinator.
- Farouk Kamoun : Professor at Manouba University and Director in a Private School
- Imed RIADH FARAH : Professor at ISAMM
- Yemna SAYEB : Assistant professor at ISAMM
- Walid CHAKER : Assistant professor at ENSI
- Mohamed FARAH : Assistant professor at ISAMM
- Nedia AMRI : Head of international cooperation and academic relations at Manouba University
- Mohamed DAKHLI : IT manager at ISAMM
- Mariem nefzi : Financial Offcier at ISAMM
- Rania BEN ZAIED : Purchasing manager et ISAMM
- Wajdi FERCHICHI: General secretary / Chief of staff



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The ITG team tasks are:

- Select of the CIO
- Design an IT strategy aligned with the institution strategy
- Evaluate, direct and monitor the IT assets

# 4. IT Governance best practices

According to GTI4U, the first component in the framework itself is the study of best practices included in the GTI4U framework. This includes three main steps. The first is the set of adaptations that must be made to this global framework to be adopted by organizations. Secondly it is aimed to conduct a self-assessment of the current organizational maturity level. Finally, and as a step to be taken by program partners, it is aimed to assess both the adaptations and the self-assessment.

## 4.1.Adaptations on IT Governance Framework best practices

Best practices of six ITG principles were discussed to establish their adequacy to the ITG framework to be adopted by the Tunisian universities (Annex A and B). After the presentation of the framework in the four Tunisian universities (Annex A), the Tunisian partners agreed to adopt the best practices framework (Annex C). A meeting minute was produced to justify this choice. The framework is composed of various best practices organised in six principles and several objectives for each principal.

### 4.1.1. Responsibility

#### 4.1.1.1. Governance Team (GT) responsibility

The best practices in this aspect are adequate for the framework of the University of Manouba. In fact, the University's Governance Team should review which IT assets should be monitored centrally and which should be delegated, the GT team should direct the strategic planning of IT in the university. The GT should fix also, from the beginning of the year, how many times IT governance decisions should appear on the schedule.

#### 4.1.1.2. IT Governance

Is the GT should be aware of the importance of IT Governance and make some promoted actions (training, communication, etc.) to disseminate in the university community the importance of proper IT governance. The GT should inform that IT Governance is the responsibility of the GT and not of IT experts and professionals. The GT should design a project for the implementation of an IT governance system in the university. The GT should assign an amount for this and identify the roles and responsibilities related to IT governance and strategy. The GT should regularly review the effectiveness of IT governance processes also.



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#### 4.1.1.3. Chief Information Officer

Those best practices related to the CIO are one of the most important. The GT should assign the responsibility of directing the management of IT and of working together with the GT to a CIO. This CIO should be an experienced and skilled governor with excellent communication skills. The CIO will take part in preparing the university's strategic.

#### 4.1.1.4. Committees

These best practices should belong to the Tunisian framework. The GT should set up an IT Strategy Committee directed by the CIO and containing other GT members and that designs and monitors IT strategy and governance. The IT Strategy Committee should meet many times per years. Those in charge of IT services or as IT service users don't should belong to the IT Strategy Committee.

#### 4.1.1.5. Assigning responsibilities

These best practices will be part of the future framework because it will help formalize the ITG inside the institution

#### 4.1.1.6. Monitoring

The monitoring best practices are validated for the framework because they will help establish balanced score and catalogue of indicators.

### 4.1.2. Strategy

#### 4.1.2.1. Strategic Plan

The best practices regarding the design of the strategic plan will be included in the framework of the University of Manouba.

#### 4.1.2.2. IT policies

GT should have some best practices regarding the design of IT policies. The GT should design a set of IT policies, aligned with the university's strategy.

#### 4.1.2.3. IT Resources

This section will include best practice regarding the planning of the dedicated resources for the different IT projects

#### 4.1.2.4. IT innovation

This best practice section will allow GT to promote and support IT innovation in the university.



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#### 4.1.2.5. IT culture

This section is adequate for the framework because the GT should promote a training plan for all the university's stakeholders to promote the mastery of technologies and the awareness of their importance for the university.

### 4.1.3. Acquisition

#### 4.1.3.1. IT investment

These best practices are important to monitor and plan the IT investment. For this, the GET should study to determine the IT assets for the university.

#### 4.1.3.2. Acquisitions policy

This section is validated within the future framework because it will help design the policies regarding the acquisition related to the IT projects. The GT should change the rules and base the new acquisition on technical and economic criteria.

#### 4.1.3.3. Suppliers

GT must establish a list of policies regarding the relationship with suppliers. The GT should have a service level agreement with the suppliers.

#### 4.1.3.4. IT projects

The best practice related to IT portfolio should be integrated with the Manouba Framework.

#### 4.1.3.5. IT acquisitions and projects priority

The GT should design and published a set of criteria that determines the priority of IT acquisitions and projects. This is very important in the Tunisian framework. The GT should fix the people responsible for supplying information and making decisions.

#### 4.1.3.6. IT projects results

The GT should have a procedure to design and continuously monitor IT projects and services. They should review the evolution of IT services and decide upon their continuity frequently. The GT should measure whether the results of the projects, once completed, have met the planned objectives this a clear procedure to analyses the satisfaction of different user groups with the results of IT projects.

#### 4.1.3.7. Collaboration and comparison

Comparing ITG results with other universities have to be done in collaboration with other institutions dealing with ITG aspects



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### 4.1.4. Performance

#### 4.1.4.1. Performance

- The GT should design and publish a policy that reflects the expected performance of university processes that are IT-based. The GT should make an internal audit and external audit to check the performance of IT services.

#### 4.1.4.2. IT services continuity

The GT should be informed on the risks and security problems that may affect the continuity of services. They should design a plan to ensure the continuity and availability of services.

#### 4.1.4.3. Information availability and quality

- Receiving the information and preparing reports to take decisions is a very important section to include also in the Framework for University of Manouba.

#### 4.1.4.4. Service level agreements

This section is adequate for the IT framework because it will help establish level agreements with providers.

### 4.1.5. Conformance

#### 4.1.5.1. Catalogues

Catalogues of IT-relates regulations and laws are essential in the ITG framework. It helps the GT should be aware of all lows and regulations.

#### 4.1.5.2. conformance

GT should implement some best practices to check the compliance of IT regulations in the university. Some reports should be submitted to the GT to determine the level of compliance of internal procedures with external laws and policies.

#### 4.1.5.3. Audits

This section is validated inside the framework because it will include best practices regarding the internal and external auditing of IT-projects

#### 4.1.5.4. Standards

The knowledge regarding the IT standards is important for the deployment of the ITG framework. A responsible must be designated from the GT and a catalogue of IT-related standards must be elaborated.



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#### 4.1.6. Human behaviour

##### 4.1.6.1. Stakeholders

Stakeholders best practices should be integrated in the framework.

##### 4.1.6.2. Resistance to change

Promoting actions to face the resistance to change that GT my face is essential in the deployment of the future framework for the University of Manouba.

##### 4.1.6.3. People in the process

These best practices are essential to support the involvement of people in the process of ITG.

##### 4.1.6.4. Workload

GT must incorporate best practices to measure human resources as well as workload dedicated to the ITG assets.

### 4.2. Self-assessment your organizational ITG maturity level in best practices

The best practices selected for the final framework were discussed. After a meeting with the ITG committee of the institution (annexed document) and 2 meetings of the ITG4TU team at Manouba (annexed document) the following conclusions were drawn.

The current situation of existing best practices at the University of Manouba is as follows:

Responsibility: 5 existing best practices

1. The GT should be aware of the importance of IT Governance
2. The GT promoted actions (training, communication, etc.) should disseminate in the university community the importance of proper IT governance
3. IT Governance should be the responsibility of the GT and not of IT experts and professionals
4. The GT should have a clear vision of the responsibility of third parties in relation to the university's IT objectives
5. The university should have a catalogue of indicators that serves to enable the GT to monitor whether the responsibilities related to the management of IT are performed correctly

Strategy: 6 existing best practices

1. The GT should plan IT acquisitions in a timely manner and they should be included in the next year's budget



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2. The GT should design a long-term programme that has the aim of implementing all the IT developments that the university needs to meet its users' needs
3. The GT should know how many IT developments are still not integrated yet
4. The GT should design a policy that expresses the support for technological innovation on campus
5. The GT should allocate a responsibility whose aim is to evaluate emerging technologies and plan their incorporation if they are suited to meeting the university's strategic needs
6. The GT should promote a training plan for all the university's stakeholders to promote the mastery of technologies and the awareness of their importance for the university

Acquisition: 15 existing best practices

1. The GT should set up a procedure to clearly and accurately measure how much the university spends on IT on an annual basis
2. The university should have a single centralised cost centre to carry out the university's main IT investments
3. The GT should instigate a study that determines the university's IT assets
4. The GT should design and publish a policy that provides guidance on different types of acquisitions
5. The university should optimise its purchases using good practices (for example, purchasing consortia, discount negotiations, purchase of special offers, etc.)
6. Service should have level agreements set up with all IT suppliers
7. A template should be created for IT projects which includes all important information (aims, benefits, steps to follow, performance criteria and associated risks) and that requires that the GT establish their order of completion
8. When calculating the costs of an IT project, the IT should consider investment and maintenance costs, human resource costs, training costs and the costs of organisational changes stemming from the project
9. The template should be created for IT projects include the criteria necessary to regularly evaluate the continuity or termination of the service or the withdrawal of an IT system in order to make decisions thereon
10. When calculating the cost of an IT project, these costs should include the design of activities and the costs necessary to train all the people involved in that project so that maximum IT performance is obtained and the services offered are improved
11. The GT should design and publish a set of criteria aligned with the strategic objectives which determines the priority of IT acquisitions and projects
12. When making an IT acquisition, the evaluation criteria should include the fact that the proposed equipment should be compatible with existing technologies, comply with standards and be flexible and adaptable for future changes that may occur within the university



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13. A procedure should be designed to continuously monitor IT projects and services in operation with a view to determining their performance, redesigning them, if necessary, and to continually seek cost savings
14. When calculating the benefits of an IT project, a wide range of aspects ranging from cost savings to user satisfaction should be measured
15. The GT support initiatives should aim at exchanging experiences and collaborating with other universities

Performance: 4 existing best practices

1. The GT should devote enough resources to maintain a high level of satisfaction in user groups related to the service with regard to performance of IT-based services
2. Security measures should be in place to maintain the integrity and quality of institutional information
3. The university should actively manage user expectations (for example, through service descriptions, service level agreements, etc.)
4. In the event that deviations in service level agreements should be identified and corrective measures should be adopted

Conformance: 3 existing best practices

1. Those in charge of IT services and projects should be encouraged to take into account IT-related external regulations and laws and policies and internal procedures
2. Internal audits should be carried out to check whether IT projects and services comply with IT-related external laws and regulations and internal policies and procedures
3. The GT should be officially assigned to a person or group of people the responsibility of understanding the IT-related standards

Human Behaviour: 10 existing best practices

1. Different groupings of stakeholders should be made so as to offer them different treatment when involving them in IT-supported change processes (for example: grouping them based on their experience of IT use or forming groups according to age and level of responsibility, etc.)
2. IT project should plan included activities aimed at mitigating the risk related to a lack of commitment in participants
3. A process should be set into motion to raise awareness that leads to reducing people's resistance to an IT-based change process (information, training, etc.)
4. IT project planning should include the responsibilities assigned to all participants and activities aimed at measuring the extent to which the involvement of these people contributes to the success of the project and therefore to the change process that it promotes



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5. Committees and work groups should be created to facilitate the participation, and therefore the involvement, of stakeholders in the design, supervision and final evaluation of IT-based change processes
6. IT project should include a stage to train stakeholders on the change that is going to take place in the university service affected by the IT initiative
7. IT project should include a stage of cross training, training the heads of the university service in IT matters and technicians in the university process affected by the IT initiative
8. A professional career structure should be designed that reflects promotions based on the acquisition of skills (also IT) and on successes obtained during change processes
9. A procedure should be established to measure the level of skills (especially those related to IT) of individuals in different interest groups
10. The GT should know what human resources are available, what occupational roles there are at all times and what human potential is available to undertake new IT initiatives, avoiding overloads

| | |
|---|---|
| Responsibility Consensus | 17% |
| Strategy Concensus | 38% |
| Acquisition Consensus | 44% |
| Performance Consensus | 25% |
| Conformance Consensus | 26% |
| Human Behaviour Consensus | 71% |

**Table 1: Best practices current situation for the University of Manouba**



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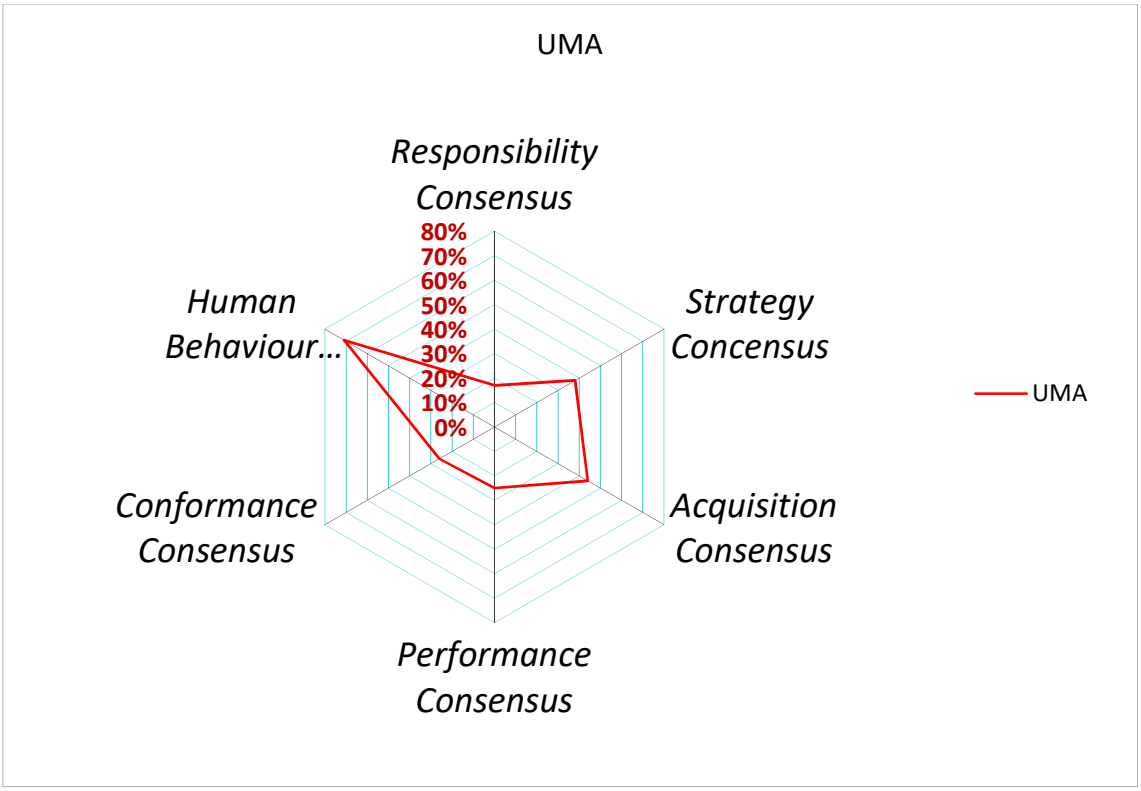


Figure 1: ITG Assessment at UMA

### 4.3.Review of your organizational ITG maturity level in best practices

This review has been conducted by program partners and will be reported in a separate document.

# 5. IT Governance maturity model

In the previous step, it was defined the set of best practices aimed to be covered by the final framework, reaching, as a consequence of that coverage, a certain maturity level with regards to best practices achievement. In this step, the second big aspect in the framework will be analyzed: maturity level. This second big aspect is developed by means of three different steps. The first is the review of the adaptations on ITG framework maturity model

### 5.1.Adaptations on IT Governance Framework maturity model

After a meeting with the ITG comity of the institution (annexed document), a meeting of the ITG4TU team at Manouba (annexed document), and meeting with the coordinators of university of Gabes, university of Sfax and university of Tunis el Manar (annexed document), the decision to keep the proposed maturity model was taken. This decision was motivated by the adequacy of this model to the Tunisian context.



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## 5.2. Review of the adaptation of the maturity model to your organization

This task is intended to be developed by program countries and will be documented in a separate document.

## 5.3. Maturity level current situation

After a meeting of the ITG4TU team at the University of Manouba (annex 8), the maturity level current situation is described as follows:

| Principle | | Current Level | Aspects |
|---|---|---|---|
| Responsibility Level 1 | Evaluate | 1 | The directors allocate management responsibilities and some IT governance responsibilities. |
| | Direct | 1 | The directors endeavour to ensure that IT management is planned. |
| | Monitor | 3 | |
| Strategy Level 1 | Evaluate | 1 | The directors carry out medium-term IT planning but from a technological perspective, not with institutional objectives in mind.<br><br>There are innovations in IT but from a technical perspective, not from a business point of view. |
| | Direct | 1 | University directors design some IT-related policies from a business point of view |
| | Monitor | 3 | The directors monitor IT activity which begins to be aligned with the university's strategic objectives |
| Acquisition Level 0 | Evaluate | 1 | When calculating the cost of a project, particular consideration is taken of the investment and maintenance costs while other costs (human resources and training initiatives) deriving from the organisational change caused by the IT project are normally excluded. |
| | Direct | 1 | |
| | Monitor | 0 | |
| Performance Level 0 | Evaluate | 1 | The directors evaluate the operational proposals put forward by the IT managers, albeit only from a technical and/or economic perspective.<br>The directors check whether any internal standards and policies have been drawn up for key aspects concerning the performance of university processes.<br>The directors understand the university's reliance on IT and they are beginning to engage in taking decisions relating to IT performance<br><br>Only the cost of the services is measured as an index for prioritising the allocation of IT assets.<br>IT assets cover the major operations of current |



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| | | | |
|---|---|---|---|
| | | | university services (though not all those deemed desirable).<br>Key decisions concerning the performance level of the services will be taken by IT managers.<br>IT managers normally have an excessive workload.<br><br>The directors design policies and standards to reflect the most important aspects regarding the performance of IT-based university processes. |
| | Direct | 0 | The directors plan IT assets so as to cover all the operations carried out by today's university services but without giving IT managers an excessive workload. |
| | Monitor | 1 | The directors measure to see whether the IT assets provide support for the university's main services and whether their users are satisfied with them.<br>The directors analyse and find out about the needs of IT service users. |
| Conformance Level 0 | Evaluate | 0 | The directors have assigned the responsibility of finding about the legislation concerning IT and ascertaining how it affects the university. |
| | Direct | 0 | Those in charge of IT exhibit the proper professional behaviour with respect to the regulations, even though there are no formal mechanisms for achieving such compliance. |
| | Monitor | 0 | Only with respect to certain individuals or on specific projects is a check made to ensure compliance with regulations (in other words this is not a general procedure).<br>The directors are familiar with key IT-related standards, although they are not widely implemented. |
| Human Behaviour Level 1 | Evaluate | 2 | The directors are concerned that everyone needed to complete the IT activity should take part. |
| | Direct | 1 | The directors are concerned to offer technical training and teach the people participating in IT projects how the services work. |
| | Monitor | 1 | |

Table 2: Current maturity level

## 5.4.Maturity goal selection

After a meeting of the ITG4TU team at Manouba (annexed document), we identified Maturity goal regarding 5 principles.

The goal maturity level for the university of Manouba is illustrated as follows:

**University of Manouba**



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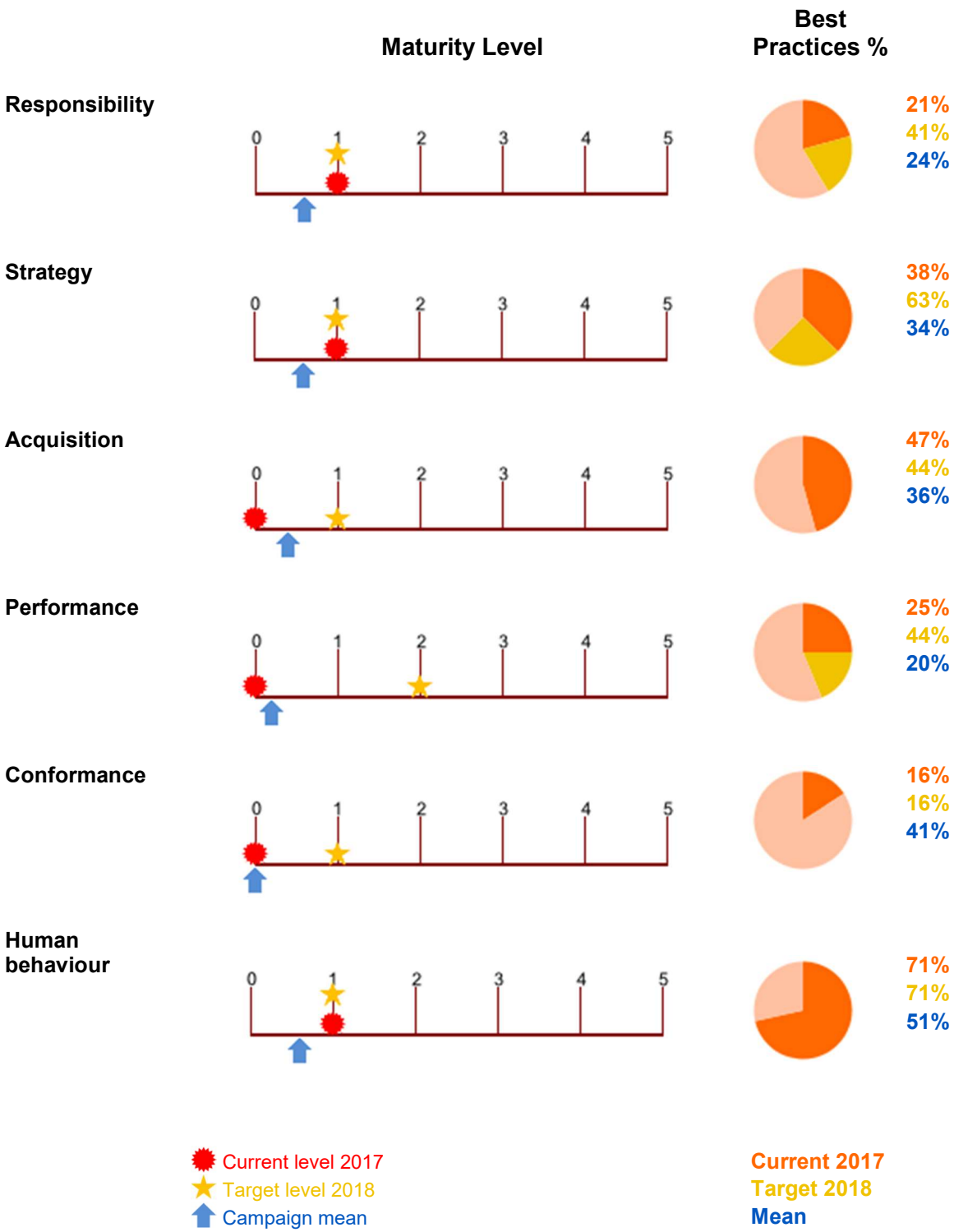


Figure 2: Maturity Goal



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To achieve this maturity level, the following actions will be planned:

| | |
|---|---|
| Responsibility | • The GT should assign a CIO the responsibility of directing the management of IT and of working together with the GT in preparing the IT strategy and governance.<br>• The CIO should form a part of the GT and participate in making governance decisions.<br>• The CIO should take part in preparing strategic plans.<br>• When choosing a CIO, the GT should bear in mind that this person should be an experienced and skilled governor with excellent communication skills.<br>• The GT should ensure that representatives of all IT users and managers participate in the IT Steering Committee.<br>• An IT Steering Committee should be set up.<br>• The importance of IT Governance in the GT should be promoted. |
| Performance | • The GT should know what human resources are available, what occupational roles there are at all times and what human potential is available to undertake new IT initiatives, avoiding overloads.<br>• The GT should design a policy that reflects the expected performance of university processes that are IT-based?<br>• An IT Strategic Plan should be designed that is aligned with the university's overall strategy or the IT strategy should be included in the overall strategy.<br>• The GT should promote the design of a procedure to analyse the satisfaction of various stakeholders with relation to the university's IT-based services in operation.<br>• The GT should regularly analyse user requirements.<br>• The GT should devote enough resources to maintain a high level of satisfaction in user groups related to the service with regard to performance of IT-based services. |
| Human Behaviour | • Everyone needed to complete the IT activity should take part.<br>• Offer technical training and teach the people participating in IT projects how the services work. |

**Table 3: Plan of improvement actions for UMA**

# 6. IT Governance framework deployment plan

Once defined the framework, it is needed to draw a deployment plan tailored to organizational circumstances and needs. In this section this plan is presented and justified.



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## 6.1.Framework Wrap-up

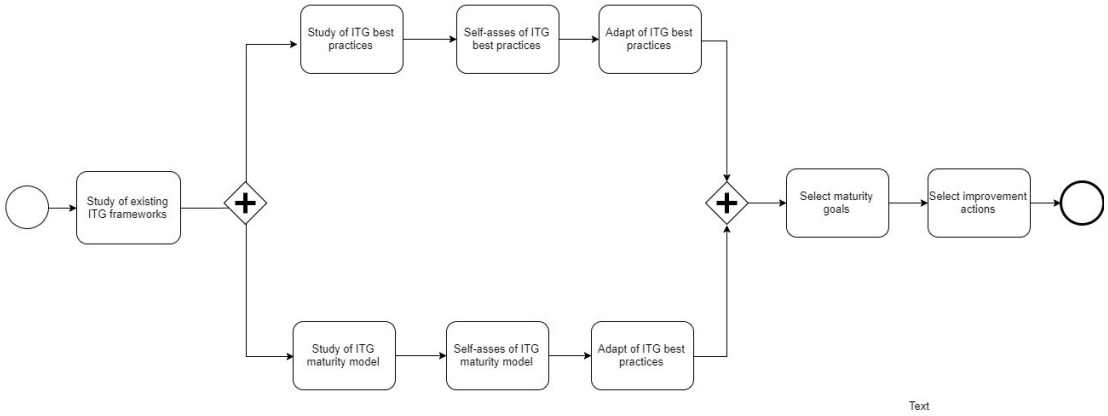


**Figure 3: ITG Business Process**

## 6.2.A process for the implementation

The implementation of the framework follows the Project Management Institute (PMI) project management method. Other likely options include Prince2 or IPMA, for instance, but PMI was chosen because it is well known, and it has set project management standards all over the world and is used by most companies (Fanning, 2014).

After the development, the adjusted overall implementation plan was validated by program partners. The implementation plan will be structured in the following six phases.

1. Initiating
2. Planning
3. Execution
4. Monitoring and controlling
5. Risk management
6. Communication and project marketing

These phases will be described in the following lines.

### 6.4.1. Initiating

The first step is to bring the leader(s) of the organization to the realization that the framework will be deployed. The main output from this phase is the case for implementation, which outlines the following aspects:

- Organization current situation (driven by maturity level already calculated)
- Organization maturity objectives
- Scope of the implementation



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- General Constraints.
- Resources Committed (Internal / External)

### 6.4.2. Planning

The main deliverables of this phase are as follows:

- A project charter which is accepted from all relevant stakeholders,
- A work breakdown structure that includes all tasks needed

The project charter is the document, which when approved, allows the project manager to set up the project and develop the project management plan together with the newly appointed project team.

## Project Charter: ITG framework implementation

| Project Overview: | | | |
|---|---|---|---|
| Project Charter Name | ITG framework implementation for the University of Manouba | | |
| Project Charter Author | Youssef BEN HALIMA, Imed RIADH FARAH & Farouk KAMOUN | | |
| Creation Date | 03/12/2017 | Last Revision Date | |
| Project Requestor | Carlos juiz | Project Manager | Youssef BEN HALIMA |
| Project Charter Status | Approved | | |
| Project Sponsor | EU | Date of project Approval | |
| Proposed Project Start & End Date | Start: January 2018<br>End: October 2018 | | |

| Project Details: | |
|---|---|
| Project Description | This project aims to enhance the IT governance inside the Tunisian universities |
| Project Purpose | The development of the IT Governance Framework tailored to Tunisian Universities |
| Project Goals & outcomes | A specific governance framework will be designed for the university of Manouba |
| Project Scope | The project scope includes the Higher Institute In Arts and Multimedia and National School of Computer Science in the University of Manouba |
| Project Deliverables | Strategic committee<br>Steering committee<br>Report on IT-policies<br>Catalogue of IT-related standards<br>Catalogue of IT-related laws<br>Catalogue of IT indicators about operations and management |
| Benefits | Awareness of ITG among the communities<br>Evaluate, Direct and monitor IT assets |
| Stakeholders | • Students<br>• Faculty<br>• Staff<br>• Researchers |



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| | |
|---|---|
| | • Community members<br>• Socio-economic partners |
| Constraints / Risks | • Delays in implementation<br>• Lack in motivation<br>• Lack in institutional support at HEIS<br>• Lack of implication of managers<br>• Lack of expertise in IT-related legislation and IT-related standards<br>• Staff to be pointed as CIO |
| Assumption | • Best practices visits are performed as described<br>• Programme countries institutions present IT Governance frameworks installed<br>• University Government is committed with the development of the IT Governance framework<br>• There are resources available for teaching and attending trainings on IT Governance |
| Project team | • Youssef BEN HALIMA<br>• Imed RIADH FARAH<br>• Farouk KAMOUN<br>• Nedia AMRI<br>• Walid CHAKER<br>• Mohamed FARAH<br>• Yemna SAYEB |

The next step is the definition of the work breakdown structure (WBS), schedules and activities. After the finalization of the WBS, the activities will be supplemented with the needed number of workdays to complete an activity. The accumulation of the estimated workdays follows the bottom up approach.



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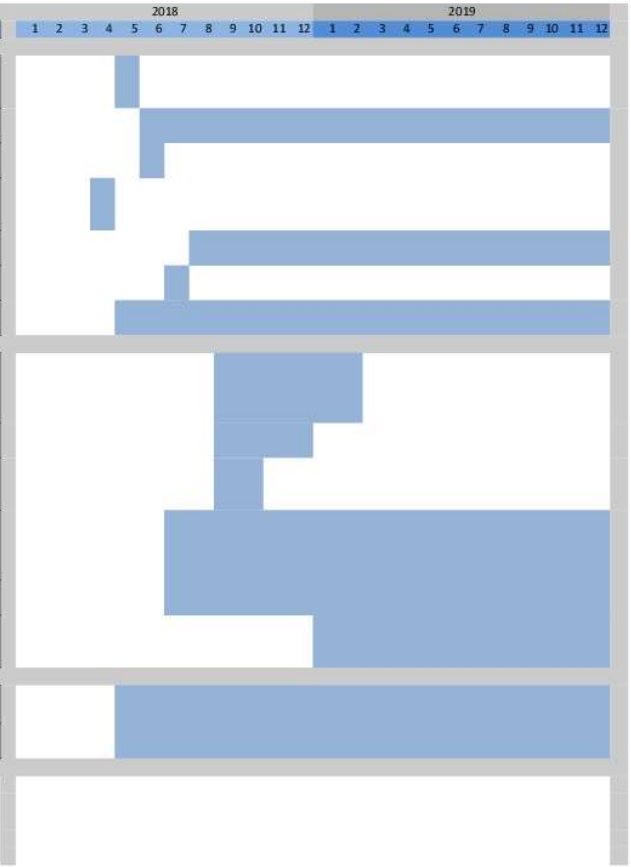
| | Actions | Priority | Responsible | Tasks | Deliverable |
|---|---|---|---|---|---|
| I | Responsability | | | | |
| R1 | The GT should assign a CIO the responsibility of directing the management of IT and of working together with the GT in preparing the IT strategy and governance. | HIGH | GT | *Nominate a CIO.<br>*Prepare the responsability list for the CIO | Document of designation of the CIO and his responsabilities |
| R2 | The CIO should form a part of the GT and participate in making governance decisions. | HIGH | GT | *participation to making Governance Decisions | PV of meetings with GT |
| R3 | The CIO should take part in preparing strategic plans. | HIGH | CIO | Prepare the strategic plan.IT section of the strategic Plan | The IT Strategic Plan |
| R4 | When choosing a CIO, the GT should bear in mind that this person should be an experienced and skilled governor with excellent communication skills. | HIGH | GT | *Propose many CV to the GT<br>*choose among the cv the best CIO | CV of the persons and the report for the best CV |
| R5 | The GT should ensure that representatives of all IT users and managers participate in the IT Steering Committee. | LOW | CIO+GT | *The CIO need to prepare the list of participant<br>*The CIO select the participant for each meeting | List of participant per meeting |
| R6 | An IT Steering Committee should be set up. | MEDIUM | CIO+GT | *Prepare the list of IT Steering Committee<br>*Present the list for the GT to validate | List of members of the steering committee |
| R7 | The importance of IT Governance in the GT should be promoted. | LOW | CIO+GT | *Promote the importance of IT Governance | leaflets,catalogue, Stands, Posters |
| II | Performance | | | | |
| D1: | The GT should know what human resources are available, what occupational roles there are at all times and what human potential is available to undertake new IT initiatives, avoiding overloads. | MEDIUM | GT+ITSC | *Prepare the list of available human ressources and their roles<br>*Available human potential | *List of Available human ressources, their roles and their potential |
| D2: | The GT should design a policy that reflects the expected performance of university processes that are IT-based? | MEDIUM | GT | *designing the policy | *the designed policy |
| D3: | An IT Strategic Plan should be designed that is aligned with the university's overall strategy or the IT strategy should be included in the overall strategy. | HIGH | GT+CIO | *Design a IT strategic Plan | *The strategic plan including the IT strategic Plan |
| D4: | The GT should promote the design of a procedure to analyse the satisfaction of various stakeholders with relation to the university's IT-based services in operation. | MEDIUM | GT+ITSC | *Design a procedure for user satisfaction<br>*execute a procedure<br>*mesure and analyses the satisfaction | *a report on the procedure<br>*the satisfaction survey<br>*the result and analysis of the survey |
| D5: | The GT should regularly analyse user requirements. | MEDIUM | GT+ITSC | *Analyse user requirements | report on the user requirement analysis |
| D6: | The GT should devote enough resources to maintain a high level of satisfaction in user groups related to the service with regard to performance of IT-based services. | MEDIUM | ITSC | *mesure the satisfaction before and after using the services | report on the mesures |
| II | Human Behaviour | | | | |
| H1: | Everyone needed to complete the IT activity should take part. | LOW | ITSC | *Invite all persons needed to complete the IT activity | List of invited persons |
| H2: | offer technical training and teach the people participating in IT projects how the services work. | MEDIUM | ITSC | *List of trainings | report on trainings |




| | |
|---|---|
| GT | GOVERNANCE TEAM |
| CIO | CHIEF INFORMATION OFFICER |
| ITSC | IT STEERING COMMITEE |



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### 6.4.3. Execution

In this project phase, the actual implementation of the framework and its factors and metrics is conducted and the different steps towards the implementation will be discussed.

| Principles | Actions | Start | End |
|---|---|---|---|
| Responsibility | The GT should assign a CIO the responsibility of directing the management of IT and of working together with the GT in preparing the IT strategy and governance. | May 2018 | May 2018 |
| | The CIO should form a part of the GT and participate in making governance decisions. | June 2018 | December 2019 |
| | The CIO should take part in preparing strategic plans. | June 2018 | June 2018 |
| | When choosing a CIO, the GT should bear in mind that this person should be an experienced and skilled governor with excellent communication skills. | April 2018 | April 2018 |
| | The GT should ensure that representatives of all IT users and managers participate in the IT Steering Committee. | August 2018 | December 2019 |
| | An IT Steering Committee should be set up. | July 2018 | July 2018 |
| | The importance of IT Governance in the GT should be promoted. | May 2018 | December 2019 |
| Performance | The GT should know what human resources are available, what occupational roles there are at all times and what human potential is available to undertake new IT initiatives, avoiding overloads. | September 2018 | February 2019 |
| | The GT should design a policy that reflects the expected performance of university processes that are IT-based? | September 2018 | December 2018 |
| | An IT Strategic Plan should be designed that is aligned with the university's overall strategy or the IT strategy should be included in the overall strategy. | September 2018 | October 2018 |
| | The GT should promote the design of a procedure to analyze the satisfaction of various stakeholders with relation to the university's IT-based services in operation. | July 2018 | December 2019 |
| | The GT should regularly analyze user requirements. | July 2018 | December 2019 |
| | The GT should devote enough resources to maintain a high level of satisfaction in user groups related to the service with regard to performance of IT-based services. | January 2019 | December 2019 |
| Human Behavior | Everyone needed to complete the IT activity should take part. | May 2018 | December 2019 |
| | offer technical training and teach the people participating in IT projects how the services work. | May 2018 | December 2019 |

**Table 4: Dates of execution**



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### 6.4.4. Monitoring and controlling

The goal of this phase is to put mechanisms in place to ensure that performance improvements resulting from the project are sustained over time and ultimately lead to opportunities for additional performance gains. The main deliverable of this phase is a defined and implemented controlling system for the aspects included in the framework that allows a regularly assessment of the success of the ITG framework.



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| Principles | Actions | Evidence | KPI |
|---|---|---|---|
| Responsibility | The GT should assign a CIO the responsibility of directing the management of IT and of working together with the GT in preparing the IT strategy and governance. | Document of designation of the CIO and his responsibilities | -Number of meeting of the steering committee<br>-Number of dissemination events<br>- Number of times appear an IT governance subject at the GT agenda |
| | The CIO should form a part of the GT and participate in making governance decisions. | PV of meetings with GT | -Number of participation in the GT |
| | The CIO should take part in preparing strategic plans. | The IT Strategic Plan | -Number of participation in the Strategic plan preparation |
| | When choosing a CIO, the GT should bear in mind that this person should be an experienced and skilled governor with excellent communication skills. | CV of the persons and the report for the best CV | -Number of proposed CV<br>-Number of qualified candidates<br>-Number of years of experience as CIO or High level director for the selected CIO |
| | The GT should ensure that representatives of all IT users and managers participate in the IT Steering Committee. | List of participant per meeting | -Number of present in the IT steering committee |
| | An IT Steering Committee should be set up. | List of members of the steering committee | -Number of meetings for the IT Steering Committee |
| | The importance of IT Governance in the GT should be promoted. | leaflets, catalogue, stands, posters | -Number of communication actions done to promote the IT Governance |
| Performance | The GT should know what human resources are available, what occupational roles there are at all times and what human potential is available to undertake new IT initiatives, avoiding overloads. | list of available human resources their roles and their potential | -Number of full time persons are available to run new IT initiatives |
| | The GT should design a policy that reflects the expected | the designed policy | -number of designed policies |



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| | | | |
|---|---|---|---|
| | performance of university processes that are IT-based? | | |
| | An IT Strategic Plan should be designed that is aligned with the university's overall strategy or the IT strategy should be included in the overall strategy. | the strategic plan including the IT strategic Plan | Number of IT Strategies aligned with the strategic plan of the university |
| | The GT should promote the design of a procedure to analyse the satisfaction of various stakeholders with relation to the university's IT-based services in operation. | a report on the procedure, the satisfaction survey, the result and analysis of the survey | Number of satisfaction surveys.<br>Number of customers included in the survey |
| | The GT should regularly analyse user requirements. | report on the user requirement analysis | Number of reports for user requirements analysis |
| | The GT should devote enough resources to maintain a high level of satisfaction in user groups related to the service with regard to performance of IT-based services. | report on the measures | Number of resources devoted.<br>Number of successful projects |
| Human Behavior | Everyone needed to complete the IT activity should take part. | list of invited persons | Number of persons |
| | Offer technical training and teach the people participating in IT projects how the services work. | report on trainings | Number of persons<br>Number of training session |

**Table 5 : List of KPI**



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### 6.4.5. Risk management

The purpose of this part is to define and formalize the risk management procedures to be followed during and after the implementation of the framework. The aim of risk management is to minimize the impact of several types of risks on the project, by detecting and addressing potential risks before significant, negative consequences occur. In what follows, main risk management aspects will be developed in the context of this project.

RISK IDENTIFICATION

The following Risks have been considered for this project:

- Delays in implementation
- Lack in motivation of the Rector
- Lack in institutional support at HEIS
- Lack of implication of managers
- Lack of expertise in IT-related legislation
- Staff to be pointed as CIO
- Lack of support from the ministry of higher education
- CIO not able to define IT strategic objectives
- Objectives not well defined
- Lack of documentation
- Lack of training
- Not available budget for the IT projects
- IT projects budget is very low
- Not aware of standards and Lack of expertise of standards
- Satisfaction of stakeholders is unheeded (ignored)

RISK ANALYSIS

In what follows the list of risks is tagged with regards to probability and impact by means of a Likert scale (Low, Medium, High).

| Risk ID | Risks | Impact |
|---|---|---|
| R1 | Delays in implementation | HIGH |
| R2 | Lack in motivation of the Rector | HIGH |
| R3 | Lack in institutional support at HEIS | MEDIUM |
| R4 | Lack of implication of managers | HIGH |
| R5 | Lack of expertise in IT-related legislation | HIGH |
| R6 | Staff to be pointed as CIO | HIGH |
| R7 | Lack of support from the ministry of higher education | LOW |
| R8 | CIO not able to define IT strategic objectives | LOW |
| R9 | Objectives not well defined | HIGH |
| R10 | Lack of documentation | LOW |



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| | | |
|---|---|---|
| R11 | Lack of training | LOW |
| R12 | Not available budget for the IT projects | HIGH |
| R13 | IT projects budget is very low | MEDIUM |
| R14 | Not aware of standards and Lack of expertise of standards | HIGH |
| R15 | Satisfaction of stakeholders is unheeded (ignored) | MEDIUM |

**Table 6 : RISK PRIORITIZATION**

The next step in the risk management is the prioritization of the risks and the selection of the set of risks to be managed.

All the defined risks will be managed, and the priority is the following:

The higher the impact of the risk is, the sooner we need to deal with the risk. We start with

- Delays in implementation
- Lack in motivation of the Rector
- Lack of implication of managers
- Lack of expertise in IT-related legislation
- Staff to be pointed as CIO
- Objectives not well defined
- Not available budget for the IT projects
- Not aware of standards and Lack of expertise of standards

Then with:

- Lack in institutional support at HEIS
- IT projects budget is very low
- Satisfaction of stakeholders is unheeded (ignored)

Finally, with the low risks

- Lack of support from the ministry of higher education
- CIO not able to define IT strategic objectives
- Lack of documentation
- Lack of training

RISK MONITORING, MANAGEMENT AND CONTROL

| Risk Information Sheet | | | |
|---|---|---|---|
| Risk ID: R1 | Date: 01/01/2018 | Probability: HIGH | Impact: HIGH |
| Description: Delays in implementation | | | |
| Refinement/Context:<br>The framework implementation starts with some delays regarding the development plan. The delays | | | |



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| |
|---|
| are caused by the appearance of uncontrolled events like social protestations or employees in holidays. |
| Mitigation/Monitoring:<br>When following the dates of the development plan we can notice that some events are not established, or the dates are not followed. We need to lift a notification each time that a date is programmed and not followed. |
| Management/Contingency plan:<br>The coming tasks are programed in time, so the delays are absorbed. If not possible, we need to adjust the whole calendar and rearrange the activities to be done in a parallel way instead of sequential way. |
| Current status:<br>Some delays on the whole project are detected but the team is working on how to rearrange the schedule. |

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| Originator: Youssef BEN HALIMA | Assigned: Youssef BEN HALIMA |

| Risk Information Sheet | | | |
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| Risk ID: R2 | Date: 01/01/2018 | Probability: LOW | Impact: HIGH |
| Description: Lack in motivation of the Rector | | | |
| Refinement/Context:<br>All country members have all the motivation needed, the lack could be in the high-level management of institutions and university. The rector is the most important person that needs to be motivated for the success of the IT governance implementation. | | | |
| Mitigation/Monitoring:<br>Discussions with the rector and the partner's institution Directors, the confirmation of the rector all the time that she is aware of the importance of the project. The governance team is all the time announcing that the governance is one of the success keys of the University. | | | |
| Management/Contingency plan:<br>Discussion and meeting with all directors and the rector. Start with information session, meet the directors, speak with them, try to explain more and more, provide as much details as you can. | | | |
| Current status:<br>High motivation is reported from the University rector and Institution directors, the rector announced that she is really very motivated and wants to see the project success. | | | |
| Originator: Youssef BEN HALIMA | | Assigned: Youssef BEN HALIMA | |

| Risk Information Sheet | | | |
|---|---|---|---|
| Risk ID: R3 | Date: 01/01/2018 | Probability: LOW | Impact: MEDIUM |
| Description: Lack in institutional support at HEIS | | | |
| Refinement/Context:<br>The director of the institution doesn't need such a kind of IT Governance. We don't have the support of the directors. We don't have the institutional support for any kind of action. | | | |
| Mitigation/Monitoring:<br>Not implication of the directors is indicated, the directors don't accept to perform any action related to IT governance. | | | |
| Management/Contingency plan:<br>A meeting with the director to convince him by the importance of IT Governance. The | | | |



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| governance team and scientific council are also targeted by this meeting. All the arguments are listed to avoid any kind of resistance. | |
| Current status:<br>The institution supported the project very well. We have the support of the former director and the backing of the new one. | |
| Originator: Youssef BEN HALIMA | Assigned: Youssef BEN HALIMA |

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| Risk Information Sheet | | | |
| Risk ID: R4 | Date: 01/01/2018 | Probability: HIGH | Impact: HIGH |
| Description: Lack of implication of managers | | | |
| Refinement/Context:<br>The IT managers don't support the Governance of IT and they lack of motivation. | | | |
| Mitigation/Monitoring: The managers don't obey to the requested actions, they claim the failure of the IT Governance process all the time. They also try by all the means to stop the IT Governance process. | | | |
| Management/Contingency plan:<br>The managers are constantly asked and motivated and their accountability is verified. If necessary, try to avoid non serious managers and old mind managers. Speak with rector to find a financial motivation for the involved managers. | | | |
| Current status:<br>We asked the managers if they are involved in the process of IT Governance. | | | |
| Originator: Youssef BEN HALIMA | | Assigned: Tunisian coordinators | |

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| Risk Information Sheet | | | |
| Risk ID: R5 | Date: 01/01/2018 | Probability: LOW | Impact: HIGH |
| Description: Lack of expertise in IT-related legislation | | | |
| Refinement/Context:<br>We need to know lows and regulation in the country to be sure that all the actions complies with the law. | | | |
| Mitigation/Monitoring:<br>Research of experts in the lows of governance. | | | |
| Management/Contingency plan:<br>Make a call for expert to join the IT Governance initiative. Make sure to avoid any action if don't fit with Tunisian lows and regulations. Replace outlaw's actions with other one. | | | |
| Current status:<br>There still a lack of experts in the law and legislation related to IT governance in Tunisia. | | | |
| Originator: Youssef BEN HALIMA | | Assigned: Managers and coordinators | |

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| Risk Information Sheet | | | |
| Risk ID: R6 | Date: 01/01/2018 | Probability: MEDIUM | Impact: HIGH |
| Description: Staff to be pointed as CIO | | | |
| Refinement/Context:<br>When choosing a CIO, the GT should bear in mind that this person should be an experienced and skilled governor with excellent communication skills. | | | |
| Mitigation/Monitoring: | | | |



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| The activities of the CIO and his implication in the IT Governance as a CIO and not an IT manager. He needs to perform meetings with the Governance Team and define the IT objectives with the governance team. |
| Management/Contingency plan:<br>Training for the CIO, Change the CIO's mind and way of thinking, give the CIO the needed experience by travelling and see the European experience of the CIO. |
| Current status:<br>The CIO in Manouba university is selected by the rector; it is an old engineer in the university working on the Governance folder for 6 months. |

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| Originator: Youssef BEN HALIMA | Assigned: Governance team |

| Risk Information Sheet | | | |
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| Risk ID: R7 | Date: 01/01/2018 | Probability: LOW | Impact: LOW |
| Description: Lack of support from the ministry of higher education | | | |
| Refinement/Context:<br>The ministry of higher education is not supporting the project and don't care about the IT Governance in the higher education institutions. | | | |
| Mitigation/Monitoring:<br>When some actions are asked to be performed at the ministry level, they are not involved enough od they refuse to perform the actions. | | | |
| Management/Contingency plan:<br>Try to avoid any action when is involve the ministry. Invite the responsible of the ministry to be informed of the actions we do and of the new processes. | | | |
| Current status:<br>We didn't ask the ministry to do any action concerning the IT Governance Yet. | | | |
| Originator: Youssef BEN HALIMA | | Assigned: Governance team | |

| Risk Information Sheet | | | |
|---|---|---|---|
| Risk ID: R8 | Date: 01/01/2018 | Probability: LOW | Impact: LOW |
| Description: CIO not able to define IT strategic objectives | | | |
| Refinement/Context:<br>The CIO is not able to think objectives at the strategic level and not able to ensure the objectives are very well implemented in the IT management Level. | | | |
| Mitigation/Monitoring:<br>Until now, there are no IT strategic objectives performed by the CIO. | | | |
| Management/Contingency plan:<br>Help the CIO to define the IT strategic objectives.<br>Perform some training session for the CIO on how to define and write IT objectives. | | | |
| Current status:<br>The CIO is assigned but didn't work with the Governance team on the strategic objectives of the IT. | | | |
| Originator: Youssef BEN HALIMA | | Assigned: Governance team | |

| Risk Information Sheet | | | |
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| Risk ID: R9 | Date: 01/01/2018 | Probability: LOW | Impact: HIGH |



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| Description: Objectives not well defined | |
| Refinement/Context:<br>The objectives are not clear for everybody and not well defined. | |
| Mitigation/Monitoring:<br>The customers can understand the IT objectives | |
| Management/Contingency plan:<br>Help the CIO Write IT Strategic Objectives, define clear objectives. Reformulate objectives. | |
| Current status:<br>Actually, there is no IT Governance objectives defined. | |
| Originator: Youssef BEN HALIMA | Assigned: Governance team |

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| Risk Information Sheet | | | |
| Risk ID: R10 | Date: 01/01/2018 | Probability: LOW | Impact: LOW |
| Description: Lack of documentation | | | |
| Refinement/Context:<br>There is no documentation available for the IT Governance project. | | | |
| Mitigation/Monitoring:<br>When a document is needed and is not found we can be aware of this risk and execute the contingency plan. | | | |
| Management/Contingency plan:<br>The governance team needs to write the entire needed document and afford it to the concerned persons. We need to have a common EDM system where we put all the needed documentation and try to ameliorate those documents. | | | |
| Current status:<br>Not available EDM system available and need to be setup from the beginning. | | | |
| Originator: Youssef BEN HALIMA | | Assigned: Governance team | |

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| Risk Information Sheet | | | |
| Risk ID: R11 | Date: 01/01/2018 | Probability: HIGH | Impact: LOW |
| Description: Lack of training | | | |
| Refinement/Context:<br>When training is not performed, je members of the governance team cannot be aware of the problems that can acquire. | | | |
| Mitigation/Monitoring:<br>The governance team is asking all the time for concepts and definition of terms that can be performed in the training. | | | |
| Management/Contingency plan:<br>A training session need to be organized in the beginning of the IT Governance project. Each time we have a new team, we need to give them new training to understand all the aspects of the IT Governance before they start to work. | | | |
| Current status:<br>Only few members have received training on the basic concepts of the IT Governance. | | | |
| Originator: Youssef BEN HALIMA | | Assigned: Governance team | |

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| Risk Information Sheet |



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| Risk ID: R12 | Date: 01/01/2018 | Probability: MEDIUM | Impact: HIGH |
|---|---|---|---|
| Description: Not available budget for the IT projects | | | |
| Refinement/Context:<br>When the budget for IT projects is not available | | | |
| Mitigation/Monitoring:<br>See the budget composition how the dedicated amount for IT projects is | | | |
| Management/Contingency plan:<br>In this case, the Governance team needs to specify the exact amount of the budget that will be dedicated of IT projects and not clearly represented in the composition of the budget. The Governance team needs to be clear in coming years and dedicate a part of the budget only for IT projects. | | | |
| Current status:<br>There is an amount of the budget that is dedicated to the IT projects. | | | |
| Originator: Youssef BEN HALIMA | | Assigned: Governance team | |

| Risk Information Sheet | | | |
|---|---|---|---|
| Risk ID: R13 | Date: 01/01/2018 | Probability: MEDIUM | Impact: MEDIUM |
| Description: IT projects budget is very low | | | |
| Refinement/Context:<br>There is an amount of the budget dedicated to IT projects, but the amount is very low. | | | |
| Mitigation/Monitoring:<br>The needs of the university in term of IT assets are more important than the amount of the budget dedicated for IT. | | | |
| Management/Contingency plan:<br>Adding an extra amount for IT projects<br>Choose small project for this year and leave the biggest projects for the next one.<br>Try to have extra resources coming from European projects or international funds. | | | |
| Current status:<br>The actual amount is higher than the needs. | | | |
| Originator: Youssef BEN HALIMA | | Assigned: Governance team | |

| Risk Information Sheet | | | |
|---|---|---|---|
| Risk ID: R14 | Date: 01/01/2018 | Probability: HIGH | Impact: HIGH |
| Description: Not aware of standards and Lack of expertise of standards | | | |
| Refinement/Context:<br>There is no standard to follow. The Governance team is not aware that many universities follow standard to achieve the governance process. | | | |
| Mitigation/Monitoring:<br>Ask the team if they are following any standard while performing IT Governance. | | | |
| Management/Contingency plan:<br>Many studies have been done to compare standards and many universities all over the world explain how they choose their standard. We can propose training on the standards and explain how each standard is elaborated and what artifacts are concerned. | | | |
| Current status:<br>No standard has been chosen for La Manouba university. | | | |
| Originator: Youssef BEN HALIMA | | Assigned: Governance team | |



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| Risk Information Sheet | | | |
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| Risk ID: R15 | Date: 01/01/2018 | Probability: HIGH | Impact: MEDIUM |
| Description: Satisfaction of stakeholders is unheeded (ignored) | | | |
| Refinement/Context:<br>After the projects are finished, there is no survey to ask if the stakeholders are satisfied. | | | |
| Mitigation/Monitoring:<br>The level of satisfaction of users before and after the spending of the budget is not measured. | | | |
| Management/Contingency plan:<br>Start to perform some satisfaction surveys before and after the IT projects. The satisfaction of IT customers is measured. This measurement needs to be performed each year for all new and old projects. | | | |
| Current status:<br>No satisfaction surveys are done. | | | |
| Originator: Youssef BEN HALIMA | | Assigned: Governance team | |

### 6.4.6. Communication and project marketing

In this matter, it is needed to develop two kinds of deliverables.

- A communication plan, that defines the intensity of communication as well as target groups and communication needs. This includes the identification of these aspects:
  - set up of communication infrastructure,
  - identification of target groups,
  - determination of communication needs,
  - development of an integrated communication planning (communication channels, frequency and intensity, feedback channels, etc.) aligned to the project phases; this also includes project marketing activities and material,
  - Identification and formulation of key messages and testing of the messages via selected employees.

For the communication, the IT committee will execute different actions depending on the target groups; the committee of the university, the advisor committee, administration officers' students and industrials. Here, a communication plan will be defined as follows;

- Organizing a first info day oriented to the university committee and all the director of Manouba institutions. (Materials; conference room of the university, stands and posters about the ITG4TU project deliverables; A leaflets/catalogues, statistics and best practices of the European partners.)
- A meeting of the advisor committee members and the entire administrative officer; financial service, technical staff, acquisition service, human resource responsible. (Materials; Meeting room of the institution, stands and posters about the ITG4TU



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project deliverables; A leaflets/catalogues, statistics and best practices of the European partners, actual ITG situation compared to European partners, objectives of the ITG project.)

- Organizing a second info day fully oriented to the students.
- Organizing an open day to industrials and decision makers. (Materials; Meeting room of the institution, stands and posters about the ITG4TU project, deliverables; leaflets/catalogues)
- Contacting the media with a mixed group of university advisors, administrator officers and students for attendance in radio and/or TV emission. (deliverables; leaflets/catalogues, Video sequence)
- Using the social media to improve the dissemination. (deliverables; Links, posters, leaflets, video sequence, photos)

# 7. Conclusions

The ITG framework of the university of Manouba was designed after studying the existing frameworks in other countries. The literature review showed that the most adequate framework for the university of Manouba is the Spanish framework with minor modifications. The framework is composed of various best practices organized in six principles: Responsibility, strategy, acquisition, performance, conformance and human behavior. The best practices to include in the future framework were established in coordination with the university of Sfax, Gabes and El Manar. The Tunisian partners adopted the same framework. Once the framework designed, the ITG team of the university of Manouba evaluated the current situation of IT governance. This situation was later assessed and validate from the EU partners. Another aspect of the framework is the maturity level matrix. This matrix was designed in coordination with the other Tunisian partners. It organizes the maturity levels in different aspects: Evaluate, direct and monitor. The ITG team used this matrix to calculate the current maturity level of ITG regarding the six principles of governance. By using the existing best practice as well as the current maturity level, the KTI tools, a set of improvement actions were proposed. These actions were planned to be deployed in the future according to a Gantt diagram.



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