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PROJECT MANAGEMENT AND BUSINESS ANALYSIS: AN ANALYSIS OF COFIDIS PORTUGAL

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Alone we can do so little; together we can do so much.
- Hellen Keller

Abstract

Project managers and business analysts are more and more critical in nowadays' companies. This dissertation explores the role of the business analyst and project manager at Cofidis Portugal, aiming at three main goals: to find out whether these roles are clear for the project team; to understand how the PM-BA/BA-PM relationship is perceived, and; to outline opportunity measures for both project management and business analysis.

More than understanding the how project managers and business analysts perceive each other's roles, this research intends to show a 360º overview of the roles of project manager and business analyst. This means that the perspective of the reality shown in this research is not only from the project manager's or business analyst's point of view, but from all project stakeholders' point of view. To reach this goal, 57 answers from project team members from different areas at Cofidis Portugal were analyzed.

The findings show that project team members are generally aware of project management and business analysis tasks. However, the respondents find overlapping tasks between both areas. Although they define the PM-BA/BA-PM relationship as neutral, they also agree on the fact that there is room for improvement. As for improvement measures, three are suggested: fostering a PM-BA/BA-PM partnership, implementing a dynamic team and improve business knowledge.

Resumo

Gestores de projeto e analistas funcionais são cada vez mais importantes nas empresas de hoje em dia. Esta dissertação explora a função de Analista Funcional e Gestor de Projeto na Cofidis Portugal. Esta investigação tem três objetivos: perceber se estas funções estão claras para a equipa de projeto; entender como a relação entre Gestor de Projeto e Analista Funcional/Analista Funcional – Gestor de Projeto é percecionada; e delinear os eixos de melhoria para a Gestão de Projeto e Análise Funcional.

Mais do que perceber como o gestor de projeto e analista funcional percecionam as funções de cada um, esta pesquisa visa mostrar uma análise 360º sobre a função de gestor de projeto e de analista funcional. Isto significa que a perspetiva da realidade mostrada nesta pesquisa não é apenas do ponto de vista de um gestor de projeto ou analista funcional, mas sim do ponto de vista de todos os stakeholders de projeto. De forma a atingir este objetivo, 57 respostas provenientes de membros das equipas de projeto de várias áreas na Cofidis Portugal foram analisadas.

Os resultados indicam que os membros da equipa de projeto têm a noção das tarefas de gestão de projeto e análise funcional. Não obstante, os inquiridos encontram tarefas sobrepostas entre as duas áreas. Apesar destes definirem a relação gestor de projeto-analista funcional/analista funcional – gestor de projeto como neutra, também concordam com o facto que existe espaço para melhorias. Em relação a sugestões de melhoria, três são sugeridas: fomentar uma parceria entre o gestor de projeto-analista funcional/analista funcional – gestor de projeto, implementar uma equipa dinâmica e melhorar o conhecimento do negócio.

Palavras chave: Gestão, Gestão de Empresas

JEL Classification System: M0, M1

Acknowledgments

Index

List of Figures

Glossary

BA – Business Analyst

BABOK – Business Analysis Body of Knowledge

BOK – Body of Knowledge

IIBA – International Institute of Business Analysis

KA – Knowledge Area

PM – Project Manager

PMBOK – Project Manager Body of Knowledge

PMI – Project Management Institute

Chapter I – Introduction

Over the years, it has become obvious that both project management and business analysis add value to an organization (Carkenord, 2005; Carkenord *et al.*, 2010; Chan, 2011; Wysocki, 2011; Maritato, 2012; James, 2015; Pullan, 2015; Project Management Institute, 2015).

While project management is a widely-known area in the project industry, business analysis professionals face uncertainty when it comes to professional recognition (Paul *et al.*, 2014; James, 2015; Pullan, 2015). Although these two professionals may not have the same level of recognition, they should complement each other, working side by side in order to achieve project success (Chan, 2011; Wysocki, 2011; Maritato, 2012; Pullan, 2015). In fact, according to Project Management Institute (2016) *"67% of high performing organizations value collaboration between project managers and business analysts"*.

The reason why these professionals are strategic to nowadays' companies (Maritato, 2012) is because they have different roles that can leverage project success. Although we can find in the literature several definitions of the roles of project manager and business analyst, (Carkenord, 2005; Maritato, 2012; Pullan, 2015), based on the institutes of reference (International Institute of Business Analysis, 2015a; Project Management Institute, 2016), we can have the following short, non-comprehensive definitions: project managers are responsible for achieving project objectives, while business analysts identify needs (requirements) and recommend solutions in accordance to those needs.

However, defining these roles is not as easy as it may seem. In fact, overlaps in tasks can be found between these two roles (Carkenord, 2005; Carkenord *et al.*, 2010; Chan, 2011; Maritato, 2012; James, 2015; Pullan, 2015; Project Management Institute, 2016) that can lead to confusion between business analysis and project management. That is why the roles that professionals should perform in each area should be clear (Carkenord *et al.,* 2010).

In the literature, we find authors who explore PM-BA/BA-PM interaction from a Project Management perspective (Carkenord *et al*., 2010; Chan, 2011; Pullan, 2015), giving tips

to project managers on how to deal with business analysts. We can also find authors aiming at integrating Business Analysis practices in Project Management (Maritato, 2012; Project; Project Management Institute, 2016). Nonetheless, we cannot find a both integrative and inclusive overview on how project managers and business analysts should interact in a project context.

This research intends to show a 360º overview of the role of project manager and business analyst in a specific reality - Cofidis Portugal. This means that the perspective of the reality shown in this research is not only from the project manager's or business analyst's point of view, but from all project stakeholders' point of view (Project Managers, Business Analysts, IT professionals, Continuous improvement team members, Testers and Business areas members).

Ultimately, this research aims to understand three aspects: whether these roles are clear for the project team; how business analysis and project management is perceived at Cofidis Portugal; and which are the improvement measures could be implemented in the name of project success. This approach allows us to have a comprehensive overview on the perception the company has of these two roles and the steps we can take to improve project management and business analysis at Cofidis Portugal.

In terms references for project management and business analysis practices, a great emphasis is given to PMBOK®, BABOK® and PMI® Practice Guides (Project Management Institute, 2015; Project Management Institute, 2016). These are the reference guides from Project Management Institute® and International Institute of Business Analysis®.

Chapter II - Literature review

2.1 Project Management and Business Analysis

Although the construction of Egypt Pyramids is usually referred as an example of the beginning of project management, this discipline has formally appeared in the 50s. In fact, the first published papers came in 1958 (Snyder, 1987), tackling scheduling methods like Critical Path Method (CPM) and Program Evaluation and Review Technique (PERT) (Pinney, 2000).

It was over the 90s that project management became popular, breaking from Traditional Project Management to Modern Project Management (Kerzner, 2009). This change happened mostly due to the period of recession experienced from 1989 to1993 as well as the increase in focus on scheduling (Kerzner, 2009).

However, project management has considerably changed in the last years. According to Project Management Institute (2013), "*project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements*".

Regarding Business Analysis, it is believed that it started around the 50s, with the beginning of the first computer applications (Wysocki, 2011). However, is not as widely known as Project Management. In fact, (Paul *et al.*, 2014) argue that business analysis is not widely known in the academic research. James (2015) goes deeper, classifying the uneasiness to accept this area as the biggest challenge business analysts can face.

According to International Institute of Business Analysis (2015a) "*business analysis is the practice of enabling change in an enterprise by defining needs and recommending solutions that deliver value to stakeholders*". Project Management Institute (2015) has a similar definition of Business analysis, describing it as "*the set of activities performed to identify business needs, recommend relevant solutions, and elicit, document and manage requirements*".

On the other hand, Chan (2011) defends that business analysis is "*the art of helping business people and solution people understand one another*". This author also defends that business analysts can be considered as a bridge business areas and developers (Chan, 2011).

James (2015) puts it simple way by saying that the role of business analyst is "*to analyze business*". Despite the simple definition provided by James (2015), the author defends that the biggest difficulties in identifying business analyst as a project role arises from the fact that a business analyst can have several job titles. Also, James (2015) refers that the title "business analyst" can cause confusion because it is composed by two words that have a broad meaning: "business" and "analyst".

Thus, this project role can be confused with several other roles, for instance, with a financial business analyst. Although there is a big difference between business analysts and financial business analyst tasks, there is another important difference when it comes to organization - in accounting's job hierarchy, the role "analyst" refers to a position below the role of "manager" (James, 2015). This fact can contribute for the lack of knowledge when it comes to business analysis tasks and purpose.

In the past, Business analysis was formerly focused on Information Technology, but nowadays it is also focused on the development of new products and services (Paul *et al.*, 2014). However, as the Business analysis profession started developing, overlapping tasks between project managers and business analysts came up (Wysocki, 2011).

In fact, authors have established comparisons in terms of definitions between project managers and Business Analysts (Carkenord, 2005; Maritato, 2012; Pullan, 2015). Carkenord (2005) defends that the Project Manager is responsible for the product deliverance "*on time and within the budget*", while the Business analyst assures that the "*product is built according to the requirements and is built correctly*". Maritato (2012) says that the project manager's focus is placed on the "*product, service or result of the project*", while the business manager's focus is placed on the stakeholder's needs. Pullan (2015) makes it simpler: while the project manager is focused on the "*scope of the project*", the business analyst is focused on the "*scope of the solution*".

4

In the case of organizations where an individual is required to perform both roles, Carkenord (2005) suggests that an "*internal debate*" may be experienced due to the existence of overlaps when performing the roles of project manager and business analyst. However, when there is both a project manager and a business analyst, the relationship between them is described as "*the dynamic duo*" (Carkenord, 2005.; Mariatato, 2012).

Facing the actual differences between these professions, training from professional institutes, such as PMI and IIBA are important (Carkenord, 2005).

Concerning degree of knowledge in the project industry on Business analysis, James (2015) tells us that in a presentation to 50 project managers given by the author back in 2013, few of them had heard about IIBA at the time. However, this case was not the only one.

In the process of contacting Project Managers to participate in a survey on the relationship between Project Managers and Business Analysts, Pullan (2015) states that most project managers argued that "*they didn't work with business analysts*". Also, some of the project managers inquired did not know that business analysis could be a role in a project (Pullan, 2015).

Finally, the need of defining the profession of the business analyst may come from the fact that there is a lack of knowledge when it comes to the business analysis project role (James, 2015). It is important to understand the differences and similarities between Project Management and Business Analysis. Therefore, there is a need to define the professions of Project Manager and Business Analyst.

2.2 Institutes and Bodies of Knowledge

To clarify necessary tasks and skills for both Project Management and Business Analysis, there are institutes and frameworks for each profession at an international level, such as Project Management Institute (PMI), International Institute of Business Analysis (IIBA), International Project Management Association (IPMA) , Australian Institute of Project Management Standards (AIPM) and Global Alliance for Project Performance Standards (Marion, 2014).

Two Institutes will be considered for the literature review: Project Management Institute (PMI) and International Institute for Business Analysis (IIBA).

IIBA and PMI can provide the necessary details when it comes to defining both professions. These institutes also certify professionals, making sure that they have "*the appropriate skill set*" (Carkenord, 2005).

Also, several authors have referred the frameworks of IBA and PMI in their publications (Carkenord *et al.*, 2010; Clare, 2011; Maritato, 2012; Zambruski, 2014).

2.2.1 Project Management Institute (PMI) and PMBOK 5th edition

The Project Management Institute (PMI) is a professional association that promotes and certifies project managers. PMI was *"founded in 1969 and delivers value for more than 2.9 million professionals"* (Project Management Institute, 2017b).

PMI provides the PMBOK Guide – its body of knowledge. According to Project Management Institute (2013), the PMBOK Guide identifies the good practices in terms of Project Management.

This guide is divided into ten Knowledge Areas and five Process Groups. In order to understand the Project Management framework promoted by Project Management Institute (2013), it is fundamental to understand both the Process Groups and the Knowledge areas described in PMBOK 5th edition.

Starting by the Process Groups, it is important to understand that these are not "*project life cycle phases*" (Project Management Institute, 2013). Instead, once project management is "*iterative*", processes from any group can be reused throughout the "*project life cycle*" (Project Management Institute, 2013), meaning that these processes can be used regardless the project phase.

The Initiating process group is described in Project Management Institute (2013) as the group of processes that are undertaken to delineate "*a new phase of an existing project*".

Moving on to Planning Process Group, it is defined as processes undertaken "*to establish the total scope of the effort''* and to set goals and action plans to reach them. (Project Management Institute, 2013). Concerning the "Executing Process Group", it is the group of processes that aim at finalizing the work previously planned to meet "*project specifications*" (Project Management Institute, 2013). The "Monitoring and Controlling Process Group" is detailed as "*processes required to track, review, and orchestrate the progress and performance of the project*" (Project Management Institute, 2013). Finally, he Closing Process Group consists of processes aimed at finishing all tasks across Process Groups *"to formally complete the project, phase or contractual obligations"* (Project Management Institute, 2013)

In PMBOK 5th edition, there are 47 "*management processes*" divided into ten Knowledge areas (Project Management Institute, 2013). These Knowledge areas can be found in **Figure 1**.

KA (Project Management Institute, 2013)	Definition (Project Management Institute, 2013)	Number of management processes
Project Integration Management	"*processes and activities to identify, define, combine, unify, and coordinate the various processes and project management activities within the Project Management Process Groups*"	6
Project Scope Management	"*processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully.*"	6
Project Time Management	"*processes required to manage the timely completion of the project.*"	4
Project Cost Management	"*processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so that the project can be completed within the approved budget*"	4
Project Quality Management	"*processes and activities of the performing organization that determine quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was undertaken.*"	3
Project Human Resources Management	"*processes that organize, manage, and lead the project team.*"	4
Project Communications Management	"*processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information*"	3
Project Risk Management	"*processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project.*"	6
Project Procurement Management	"*processes necessary to purchase or acquire products, services, or results needed from outside the project team*"	4
Project Stakeholder Management	"*processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution*"	4

Figure 1 – KAs in Project Management Institute (2013) [self-constructed]

Apart from PMBOK Guide, PMI also offers Foundational Standards, Practice Standards and Practice Guides. Among these, PMI has two guides related to Business Analysis:

- Business Analysis for Practitioners – A practice Guide, which "*describes the work of business analysis and identifies the tasks that are performed in addition to the essential knowledge and skills needed to effectively perform business analysis in programs and projects.*". (Project Management Institute, 2015);
- Requirements Management – A Practice Guide, aiming at discussing and defining requirements management work (Project Management Institute, 2016 b).

These guides have different domains. In the table below, we observe the different sections described by Project Management Institute (2015).

Domain/Section	Project Management Institute (2015)
Needs assessment	*"Discusses the business analysis work that is conducted to analyze a current business problem or opportunity and to assess the current internal or external environments of the organization for the purpose of understanding what needs to occur in order to attain the desired future state"*
Business Analysis Planning	*"Discusses the work that is conducted in order to define the business analysis approach and plan for the completion of the requirements-related activities necessary to meet the needs of the project"*
Requirements Elicitation and Analysis	*"discusses the iterative nature of the work performed to plan, prepare and conduct requirements elicitation and to analyze and document the results of that work"*
Traceability and Monitoring	*"covers the comprehensive set of activities for approving requirements and managing changes to requirements throughout the project life cycle"*
Solution Evaluation	*"discusses business analysis tasks that are performed to validate a solution that is either implemented or ready to be implemented"*

Figure 2 – Domains in Project Management Institute (2015) [self-constructed]

On the other hand, Project Management Institute (2016) publication Requirements Management, we can see that these sections are slightly altered.

Thus, instead of the domain "Business Analysis Planning" Project Management Institute (2015), Project Management Institute (2016) presents this section as "Requirements Management Plan", mentioning the importance of having a "requirements management plan or business analysis plan" for planning project activities. Also, Project Management

Institute (2016) divides "Requirements Elicitation and Analysis" (Project Management Institute, 2015) into two sections: "Requirements Elicitation" and "Requirements Analysis" (Project Management Institute, 2016). Concerning the "Traceability and Monitoring" domain referred in Project Management Institute (2015), Project Management Institute (2016) calls it "Requirements monitoring and controlling". Finally, Project Management Institute (2016) adds a new domain called "Project or phase closure", which is meant to describe a "maintenance state" that happens "upon program or phase closure".

 In fact, according to Project Management Institute (2016), this practice guide intends to bridge *PMBOK 5ᵀᴴ edition* (Project Management, 2013) with *Business Analysis for Practitioners: A Practice Guide* (Project Management Institute, 2015).

Besides providing a Book of Knowledge and various Practice Guide, as mentioned before, PMI provides certifications. The certification types can be found in **Figure 3.**

Name	Abbreviation	Target
Project Manager Professional ®	PMP ®	Project managers with experience
Portfolio Management Professional ®	PfMP ®	Professionals with both business experience and portfolio management experience
PMI Agile Certified Practitioner ®	PMI-ACP®	Experienced professionals in regular project teams and in agile methodology/ project teams.
PMI Professional in Business Analysis ®	PMI-PBA®	Professionals with project and business analysis experience.
Program Management Professional ®	PgMP®	Professionals with project and program management experience
Certified Associate in Project Management ®	CAPM®	Individuals with little or no experience in Project Management
PMI Risk Management Professional ®	PMI-RMP®	Experienced professionals in project risk management
PMI Scheduling Professional	PMI-SP®	Professionals with scheduling experience

Figure 3 – PMI certifications - Project Management Institute (2017c) [self-constructed]

All certifications require a certain amount of experience hours (except CAPM® if the individual holds a four-year degree). Also, all certifications mentioned require a certain number of training hours.

2.2.2 International Institute of business analysis (IIBA) and BABOK V3

International Institute of Business analysis (IIBA) is a *"non-profit professional association"* dedicated to Business Analysis (International Institute of Business Analysis, (2017a). Its goal is to enhance business analysts' careers by providing information, training and certification in business analysis-related areas.

IIBA was founded in 2003 in Canada. In 2015, it had 29,166 members and 7,344 certification holders (CCBA® and CBAP®) worldwide (International Institute of Business Analysis, 2015b).

This professional association provides A Guide to the Business Analysis Body Of Knowledge (BABOK Guide), the basis of knowledge for all the certifications the association offers.

BABOK aims *"to define the profession of business analysis and provide a set of commonly accepted practices"* (International Institute of Business Analysis, 2015).

In terms of certifications, IIBA offers four certification levels (International Institute of Business Analysis, 2017b), as shown below in **Figure 4.**

Level	Certification Name	Abbreviation	Target
1	Entry Certificate in Business Analysis ™	ECBA™	Individuals with little or no experience in Business Analysis
2	Certification of Capability in Business Analysis ™	CCBA ®	Professionals with 2-3 years of experience in Business Analysis
3	Certified Business Analysis Professional ™	CBAP ®	Professionals with over 5 years of experience in Business Analysis
4	Certified Business Analysis Thought Leader ™	CBATL™	Professionals with over 10 years of experience in Business Analysis

Figure 4 – IIBA certifications - International Institute of Business Analysis (2017b) [self-constructed]

Each certification has a specific exam blueprint, meaning that each certification evaluates BABOK Guide Knowledge Areas with different weights.

According to International Institute of Business Analysis (2015a), there are six BABOK®
Guide Knowledge Areas. Each area has a certain number of tasks. **Figure 5** describes the
Knowledge Areas (KA) and the number of tasks found in each one.

KA (International Institute of Business Analysis, 2015a)	Definition (International Institute of Business Analysis, 2015)	Number of tasks
Planning and Monitoring	*"organize and coordinate the efforts of business analysts and stakeholders".*	5
Elicitation and Collaboration	*"describes the tasks that business analysts perform to obtain information from stakeholders and confirm the results. It also describes the communication with stakeholders once the business analysis information is assembled"*	5
Requirements Life Cycle Management	*"describes the tasks that business analysts perform in order to manage and maintain requirements and design information from inception to retirement"*	5
Strategy Analysis	*"describes the business analysis work that must be performed to collaborate with stakeholders in order to identify a need of strategic or tactical importance (the business need), enable the enterprise to address that need, and align the resulting strategy for the change with higher- and lower-level strategies"*	4
Requirements Analysis and Design Definition	*"describes the tasks that business analysts perform to structure and organize requirements discovered during elicitation activities, specify and model requirements and designs, validate and verify information, identify solution options that meet business needs, and estimate the potential value that could be realized for each solution option."*	4
Solution evaluation	*"describes the tasks that business analysts perform to assess the performance of and value delivered by a solution in use by the enterprise, and to recommend removal of barriers or constraints that prevent the full realization of the value"*	4

Figure 5 – KAs in International Institute of Business Analysis (2015a) [self-constructed]

2.2.3 Comparison between PMI and IIBA approaches

In order to compare IIBA and PMI approaches, we will compare the Books of Knowledge
and Practice Guides from these two professional associations.

However, it is important to note that while we used in this research the latest version of
both BOKs (Project Management Institute, 2013; International Institute of Business
Analysis, 2015a), authors used the previous versions for their comparisons (Carkenord *et
al.*, 2010; Maritato, 2012). Therefore, it is necessary to outline the changes between
versions.

Project Management Institute (2013) made 23 changes to the previous PMBOK to have the 5th edition. The biggest changes that can affect the comparison between PMI and IIBA approaches when using 4th edition are the separation of the Project Communications Management Knowledge area into Project Communications Management and Project Stakeholder Management (which, as we have seen in the previous chapters, includes 4 processes) and; four new processes were added to Planning Process Groups (Plan Scope Management, Plan Schedule Management, Plan Cost Management and Plan Stakeholder Management) and one process was added to Monitoring and Controlling Process Groups (Control Stakeholders Engagement). Apart from that, twelve other Processes changed its name or its section (Project Management Institute, 2013).

Concerning the transition from BABOK v2 to BABOK v3, BABOK augmented 50% from the previous version (Larson & Larson, 2015). According to Larson & Larson (2015) The biggest changes were "*changes to knowledge areas and tasks*" and "*expansion of techniques*".

The major changes in BABOK's knowledge areas can be found in **Figure 6**, as these will be referred further on.

It is also important to note that PMBOK 5 ed. has an appendix called "FIFTH EDITION CHANGES" (Project Management Institute, 2015, while BABOK v3 (International Institute of Business Analysis, 2013) has an appendix called "Summary of Changes from BABOK® Guide v 2.0".

Knowledge area v2	Knowledge area v3
BA Planning and Monitoring	BA Planning and Monitoring
Elicitation	Elicitation and collaboration
Requirements Management and Communication	Requirements Life Cycle Management
Enterprise Analysis	Strategy Analysis
Requirements Analysis	Requirements Analysis and Design Definition
Solution Assessment & Validation	Solution Evaluation

Figure 6 – Main changes in BABOK Knowledge areas from version 2 to version 3 [self-constructed]

Thus, in to establish a comparison between PMI and IIBA approaches, the following Books of Knowledge (BOKs) and Practice guides were considered:

- PMBOK Guide 4th edition (Carkenord *et al*., 2010; Maritato, 2012). 5th edition (Project Management Institute, 2013);

- Business Analysis for Practitioners: A Practice Guide (Project Management Institute, 2015);

- BABOK Guide v3 (International Institute of Business Analysis, 2015)

- Requirements Management: A Practice Guide Project Management Institute, 2016).

Regarding the overall structure of the frameworks promoted by Project Management Institute (2013; 2015; 2016) and International Institute of Business Analysis (2015a), they are quite different. In PMBOK 5TH edition, Project Management Institute (2013) shows us ten knowledge areas and five process groups, while in BABOK Guide v3 (International Institute of Business Analysis, 2015) has six knowledge areas. "Business Analysis for Practitioners: A practice Guide" (Project Management Institute, 2015) is divided into five "domains". while Requirements Management: A Practice Guide (Project Management Institute, 2016) has seven main sections

Tasks in BABOK V3 "are organized in the following format: "*Purpose, Description, Inputs, Elements, Guidelines/Tools, Techniques, Stakeholders, Outputs*" (International Institute of Business Analysis 2015a). On the other hand, tasks in PMBOK 5TH edition are organized into "*Inputs, Tools and Techniques and Outputs*" (Project Management Institute, 2013).

As for the two Practice Guides, they are based on Project Management Institute (2013) Processes and Knowledge areas, being an "*extension*" of PMBOK 5th edition (Project Management Institute (2015; 2016).

In the previous sections of this dissertation, we have seen the meaning of Process Groups (Project Management Institute 2013), Knowledge areas (Project Management Institute 2013; International Institute of Business Analysis, 2015a) and sections/domains (Project Management Institute, 2015; 2016), which are part of the different Guides. The table in **Apendix II**).

Concerning its purpose, the BOKs and guides mentioned above aim to reach different goals: PMBOK 5 edition is a Body of Knowledge for the profession of Project Management, BABOK v3 is a Body of Knowledge for the profession of Business Analysis, Business Analysis for Practitioners: A Practice Guide demonstrates "*the practical application of this discipline*" (Project Management Institute, 2015) and Requirements Management: A Practice Guide serves as "a bridge" between PMBOK 5 edition and Business Analysis for Practitioners: A Practice Guide (Project Management Institute, 2016).

PMBOK 5th edition and BABOK v3 are the references in Project Management and Business Analysis. When looking for the definition of "project", they both define it as "*a temporary endeavor to create a unique product, service or result*". (Project Management Institute, 2013; International Institute of Business Analysis, 2015a).

Although these Bodies of Knowledge may share some concepts, there are also differences. In fact, they are built in a different way. PMBOK is purely about project management knowledge, aiming at conveying the "*what is generally recognized as good practice*" (Project Management Institute, 2013). On the other hand, BABOK, besides conveying the "*commonly accepted practices*" (International Institute of Business Analysis, 2015a) goes beyond by also "*defining the profession of business analysis and (...) help people who work with business analysts to understand the skills and knowledge they should expect from a skilled practitioner*" (International Institute of Business Analysis, 2015a). Thus, BABOK (International Institute of Business Analysis, 2015a) provides us a list of popular job titles for business analysts: "*business architect, business systems analyst, data analyst, enterprise analyst, management consultant, process analyst, product manager, product owner, requirements engineer, systems analyst*".

Although BABOK ® (International Institute of Business Analysis, 2015a) presents the list above, a greater importance is placed in the tasks of business analyst professional, rather than its job title. In other hand, PMBOK (Project Management Institute, 2013) places a greater focus on the definition of processes and knowledge areas of project management. Regarding the definition of the profession of project manager, PMBOK (Project Management Institute, 2013) only dedicates one page and a half for the to describe the role, responsibilities and project manager's skills.

This means that while PMBOK (Project Management Institute, 2013) doesn't aim at the promotion of project management, BABOK (International Institute of Business Analysis, 2015a) puts a real focus on defining and promoting the profession of Business Analyst.

In a joint IIBA-PMI White Paper aiming at comparing both BABOK and PMBOK frameworks, Carkenord *et al.* (2010) defend that while PMBOK is focused on how to manage projects, BABOK is focused on the responsibilities and value business analysis can add to an organization.

It is interesting to observe that the term "Business Analysis" is not mentioned in PMBOK 5th edition at any time, whilst "Project Management" is also not mentioned in BABOK v3. However, PMBOK does mention "Business analyst" and BABOK mentions "Project Manager".

According to PMBOK 5th edition, the business analyst is the one who generally performs a business case, "*using various stakeholder inputs*" (Project Management Institute, 2013). This may be considered as a limited definition of the profession business analyst when compared to BABOK's Business Analyst definition, which defines this professional as "*any person who performs business analysis tasks described in the BABOK® Guide, no matter their job title or organizational role. Business analysts are responsible for discovering, synthesizing, and analyzing information from a variety of sources within an enterprise, including tools, processes, documentation, and stakeholders. The business analyst is responsible for eliciting the actual needs of stakeholders—which frequently involves investigating and clarifying their expressed desires—in order to determine underlying issues and causes*" (International Institute of Business Analysis, 2015a).

As for Project Managers, International Institute of Business Analysis (2015a) states that they "*are responsible for managing the work required to deliver a solution that meets a business need, and for ensuring that the project's objectives are met while balancing the project factors including scope, budget, schedule, resources, quality, and risk.*". In this case, this definition of Project Manager seems to be in line with the definition stated in PMBOK, which describes the project manager as "*the person assigned by the performing*

organization to lead the team that is responsible for achieving the project objectives."
(Project Management Institute, 2013).

In fact, besides describing Business Analysts' tasks, BABOK (International Institute of Business Analysis, 2015a) includes in each task the role of different stakeholders, meaning "*individual [s] or group[s] that a business analyst is likely to interact directly or indirectly*".

Figure 7 shows a comparison between stakeholders listed in BABOK (International Institute of Business Analysis, 2015) and stakeholders listed in in PMBOK (Project Management Institute, 2013).

BABOK v3 (International Institute of Business Analysis, 2015a)	PMBOK 5TH ed. (Project Management Institute, 2013)
Business Analyst	-
Customer	Customers/Users
Domain Subject Matter Expert	Supporting Experts (Project Team)
End users	Customers/Users
Implementation Subject Matter Expert	Supporting Experts (Project Team)
Operational Support	Operations Management
Project Manager	Project Manager/Project Management staff
Regulator	Supporting Experts (Project Team)
Sponsor	Sponsor
Supplier	Sellers
Tester	-
-	Business partners (Project Team) Business Partner Members (Project team)

Figure 7 – Stakeholders in International Institute of Business Analysis (2015a) and Project Management Institute (2013) [self-constructed]

As we can see from the table, the role of "business analyst" is not directly listed as a stakeholder in PMBOK (Project Management Institute, 2013). Besides the stakeholders listed on the table, Project Management Institute (2013) tells us that project teams can include the role of Project staff, meaning the members who are responsible to create the project deliverables (Project Management Institute, 2013). One may argue that a Business Analyst may fall in this category, as Project Management Institute, (2013) states that "*the*

project manager also works closely and in collaboration with other roles, such as a business analyst (..)".

Two years after the publication of PMBOK 5th edition, PMI clarifies the concept of business analysis as *"the set of activities performed to identify business needs and recommend relevant solutions; and to elicit, document and manage requirements"* (Project Management Institute, 2015). As for Business Analyst, Project Management Institute (2015) defends that this role *"may be performed by any individual (...) regardless of the person's title"* and defines it as *"who performs business analysis tasks in the context of programs and projects".* This definition is somewhat aligned with the definition of business analysts in BABOK v3 that we have seen above.

In Business Analysis for Practitioners: A Practice Guide, Project Management Institute, (2015) defines the profession of Business Analysis as "*The set of activities performed to identify business needs and recommend relevant solutions; and to elicit document and manage requirements".* This definition is close to the one found in International Institute of Business Analysis (2015a): ""*Business analysis is the practice of enabling change in an enterprise by defining needs and recommending solutions that deliver value to stakeholders."*. Nonetheless, Project Management Institute (2015) refers specific tasks: "*elicit, document and manage requirements*". Finally, it seems that Project Management Institute (2015) came closer to the definition found in BABOK by International Institute of Business analysis (2015a). However, International Institute of Business Analysis (2015a) refers "*change*" and "*value*", which confirms that BABOK ® aims to demonstrate the value this role can add to an organization (Carkenord *et al.*, 2010).

Three years later, Project Management Institute (2016) publishes Requirements Management: A Practice Guide, which intends to create a "*bridge*" between PMBOK 5th edition (Project Management Institute, 2013) and Business Analysis for Practitioners: A Practice Guide (Project Management Institute, 2015) by giving an overview of the practices when it comes to requirement management.

According to Project Management Institute (2016), managing requirements is critical to an organization, being the second major cause of project failure, after unstable organization priorities.

In terms of definition, International Institute of Business Analysis (2015a) defends that a requirement "*is a usable representation of a need*", while Project Management Institute (2013; 2015; 2016) defends that a requirement is a "*condition or capability that is required to be present in a product, service, or result to satisfy a contract or other formally imposed specification*". The table below **(Figure 8)** maps the similarities and differences between requirements classification from International Institute of Business Analysis (2015) and Project Management Institute (2013; 2015; 2016).

International Institute of Business Analysis (2015a)	Project Management Institute (2013; 2015; 2016)
Business Requirements – "*statements of goals, objectives, and outcomes that describe why a change has been initiated.*"	**Business Requirements** – "*higher-level needs of the organization as a whole*"
Stakeholder Requirements - "*describe the needs of stakeholders that must be met in order to achieve the business requirements.*"	**Stakeholder Requirements** – "*needs of a stakeholder or stakeholder group.*"
Solution Requirements – "*capabilities and qualities of a solution that meets the stakeholder requirements.*"	**Solution Requirements** – "*features, functions, and characteristics of the product, service, or result that will meet the business and stakeholder requirements*"
• **Functional requirements** – "*capabilities that a solution must have in terms of the behavior and information that the solution will manage*"	• **Functional requirements** – "*behaviors of the product.*"
• **Non functional requirements or quality service requirements** – "*conditions under which a solution must remain effective or qualities that a solution must have.*"	• **Non functional requirements** – "*describe the environmental conditions or qualities required for the product to be effective.*"
Transition Requirements – "*capabilities that the solution must have and the conditions the solution must meet to facilitate transition from the current state to the future state, but which are not needed once the change is complete*"	**Transition Requirements** – "*temporary capabilities*"
-	**Project requirements** – "*actions, processes, or other conditions the project needs to meet.*"
-	**Quality requirements** – "*any condition or criteria needed to validate the successful completion of a project deliverable or fulfillment of other project requirements.*"

Figure 8 – Requirements classification (International Institute of Business Analysis, 2015a; Project Management Institute, 2013) [self-constructed]

In terms of requirements classification, we can see that classifications are very similar, except the fact that Project Management Institute (2013; 2015; 2016) adds two more categories: Project Requirements and Quality Requirements.

According to Project Management Institute (2015), *"requirements have been a concern in Project Management"*. In fact, in the definition of project management we can read that the goal of project management is *"to meet project requirements"*.

In PMBOK 5th edition, the task Collect Requirements – described as *"the process of determining, documenting and managing stakeholder needs and requirements to meet project objectives"* - can be found under the knowledge area Project Scope Management (Project Management Institute, 2015). In the figure below, the Inputs, Techniques and Outputs are summarized.
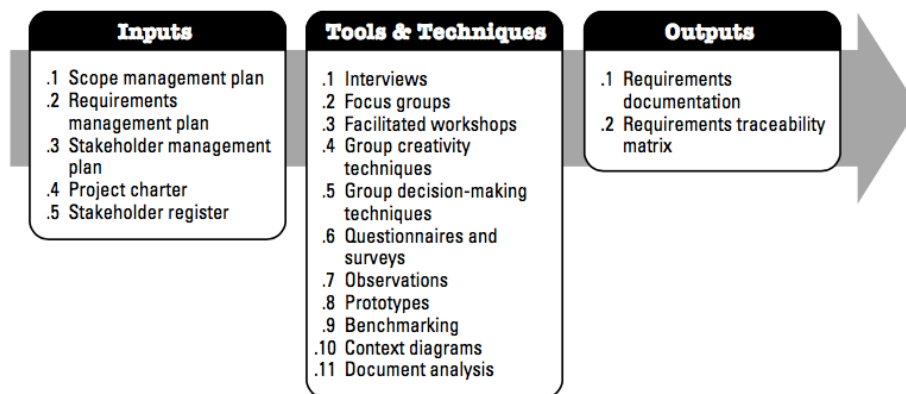
Figure 9 – Collect requirements task, in Project Management Institute (2013)

Thus, we can observe an overlap between once their collection is both referred as a Project Management task (Project Management Institute, 2013) and Business Analysis task (International Institute of Business Analysis, 2015a). Project Management Institute (2015), defends that while the project manager should be accountable for requirements, this task should be assigned to the person who has more business expertise.

In fact, according to James (2015), IIBA was built *"very closely"* to PMI. In fact, PMI had suggested a partnership between both institutes, but IIBA has refused it due to lack of alignment in terms of goals. Currently, PMI is entering in the field of Business Analysis, directly competing with IIBA

Regarding the interactions between project managers and business analysts, Project Management Institute (2015) states that *"confusion exists between project managers and business analysts"*. Thus, this Guide tries to tackle this issue by suggesting ways of

collaboration between these two roles. This issue had been tackled five years before the first publication of PMI on Business Analysis in a IIBA-PMI joint white paper by Carkenord *et al.* (2010) who defend that PM-BA confusion can arise due to lack of role definition, different job titles and expectations by the organizations. As a result, Carkenord *et al.* (2010) state that PM-BA both uncertainty over roles and tension can lead to unsuccessful project results.

After having a team of experienced project managers and business analysts revising PMBOK 4 and BABOK v3 and mapping Business analysis to each project management Process Groups, Carkenord *et al.* (2010) shows us four areas of "*conflict*": Project Scope management, Project Communications Management, Project Risk Management, project Requirements Management.

The first area of conflict is Project Scope Management. Carkenord *et al.* (2010) defend that both Project Managers and Business Analysts are focused on scope, but while project managers are focused on *"project scope"* – meaning "*the work required to deliver a product, service or result*" – business analysts' focus is on "*product scope*" – meaning "*the features and functions that characterize a product, service or result*".

In terms of Project Communications Management, Carkenord *et al.* (2010) defend that while the project manager is "*accountable for all project related communication with all project stakeholders*", it is actually the business analyst who is in contact with project stakeholders because it is through them that the requirements are identified.

Regarding Risk Management, the project manager is accountable for this area, while the business analyst works alongside the project manager by providing inputs based on requirements as well as on the impacts in the business Carkenord *et al.* (2010).

In fact, according to Carkenord *et al.* (2010), the definitions of Project Manager, Project Management, Business analysis, Business analyst are relevant for project success. Once job titles are not the same in every organization, this white paper defends that people should understand project management and business analysis tasks so the roles can be precisely defined.

Regarding Project Requirements management, the business analyst' *"requirements management plan (...) is a key input to the project management plan"*, once it contains the way requirements are going to be managed. (Carkenord *et al.*, 2010)

According to Carkenor *et al.* (2010), in order to establish effective collaboration, project managers and business analysts should know each other's roles, with special focus on the areas where there is an overlap.

However, the aim of this white paper is to give advice to project managers on how to take advantage of BA skills to achieve project success, which is the reason why PMBOK 4th is used as a reference, and not BABOK.

Maritato (2012) comes with a different approach. According this author, project outcomes can be improved through the integration of project management and business analysis, referring project managers and business analysts as *"the dynamic duo"*.

Therefore, instead of pointing out overlapping areas, Maritato (2012) describes how BABOK v2 brings value to the Process Groups found PMBOK 4th edition e ed. Thus, this author gives defends that BABOK v2 knowledge areas can improve PMBOK 4th edition.

The inputs found in Maritato (2012) are summarized in **Figure 10**.

Process Group/area PMBOK 4TH edition	KA BABOK v2
Planning, Monitoring and Controlling, Closing Process Groups	Business Analysis Planning and Monitoring
Initiating, Planning and Monitoring and Controlling Process Groups	Elicitation
Initiating, Planning, Monitoring and Controlling Process Groups	Enterprise Analysis, Solution Assessment and Validation
Communication	Requirements Analysis, Requirements Management and Communication
Planning and Executing Process Groups	Techniques
Initiating, Planning Monitoring and Controlling Process Groups	Requirements Management and Communication
Initiating Process Groups	Enterprise Analysis
Planning Executing, Executing and Monitoring and Controlling Process Groups	Solution assessment and validation

Figure 10 – PMBOK-BABOK mapping proposed by Maritato (2012) [self-constructed]

Concerning Business Analysis Planning and Monitoring, Maritato (2012) defends that it provides an "*important input to the Develop Project plan process (...) the Plan Communication process (...), the Define Scope process (...) and the Risk Management processes*". In addition, this knowledge area allows for keeping lessons learned for the future.

Also, Maritato (2012) believes that the tasks in the Knowledge Area Elicitation describe a "*professional elicitation*". Therefore, they could bring value to "*Initiating, Planning and Monitoring and Controlling*" from PMBOK 4 edition. As for the "Enterprise Analysis, Solution Assessment and Validation", they can improve PMBOK 4 ed. by inciting the use of Business Requirements as a "*starting point*" when collecting requirements. Thus, it fosters a solid definition of a business need (Maritato, 2012).

In terms of requirements modelling, Maritato (2012) believes that the "*requirements packages*" found in BABOK can ensure effective communication with the stakeholders. Also, the knowledge area Requirements Management and Communication found in BABOK v2 allow stakeholder engagement and requirements traceability (Maritato, 2012).

In terms of the techniques described in BABOK, Maritato (2012) defends that these can be adapted to different project settings.

Finally, in terms of Solution Assessment and validation, Maritato (2012) believes that it can improve Planning, Executing, Monitoring and Controlling PMBOK 4 ed. Process Groups, as it can help to "*manage stakeholder expectations*", while the project manager is focused on "*project issues*".

It is important to note that Carkenord *et al.* (2010) and Maritato (2012) had their work published before the 2015, which means that, at the time, PMI haven't had published the two Practice Guides concerning Business Analysis (Project Management Institute, 2015; 2016).

Project Management Institute (2016) classifies business analysis as a "*critical competence for project, program and portfolio management*", being "*requirements management (...) a component of business analysis*".

The table below maps the way business analysis is described by International Institute) of Business analysis (2015) with the it is described by Project Management Institute (2015).

BABOK V3 (International Institute of Business Analysis 2015a)	Business Analysis for Practitioners: A Practice Guide (Project Management Institute, 2015)	Requirement Management: A Practice Guide (Project Management Institute, 2016)
Planning and Monitoring	Business Analysis Planning	Requirements management planning
Elicitation and Collaboration	Requirements Elicitation and Analysis	Requirements elicitation
Requirements Life Cycle Management	Traceability and Monitoring	Requirements monitoring and controlling
Strategy Analysis	Needs assessment	Needs Assessment
Requirements Analysis and Design Definition	Requirements Elicitation and Analysis	Requirements Analysis
Solution Evaluation	Solution Evaluation	Solution Evaluation
-	-	Project or phase closure

Figure 11 –International Institute of Business Analysis (2015a) KAs and Project Management Institute (2015; 2016) domains [self-constructed]

In **Figure 11**, we can see that we are able to map the different sections of BABOK (International Institute of Business Analysis 2015a) with the publications on Business Analysis and Requirements Management (Project Management Institute 2015; 2016), the Knowledge areas presented in the different Guides are similar. When comparing the existent knowledge areas/sections between International Institute of Business Analysis (2015) and (Project Management Institute, 2016), we can see that they are very similar.

As already mentioned, Requirements Management: A Practice Guide intends to be a bridge between Project Management Institute (2013) and Project Management Institute (2016). Thus, in **Figure 12** below, we can find the requirements process mapped to Project Management Process Groups.
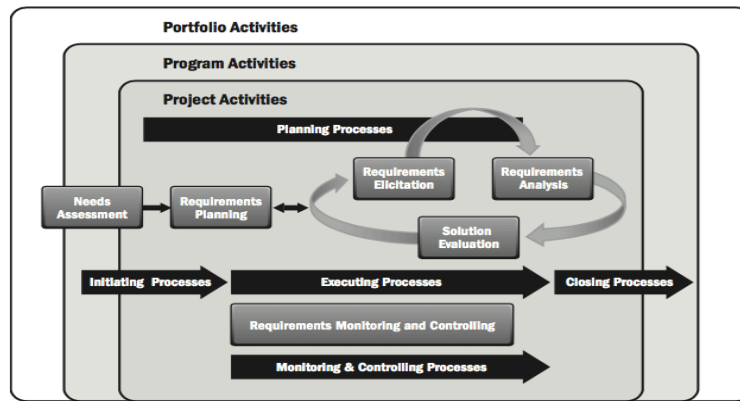
Figure 12 –Integration of Business Analysis in Project Management Process Groups, in Project Management Institute (2016)

Project Management Institute (2016) integrates Requirements Management' domains into Project management process Groups. Also, it describes the interactions these sections have in PMBOK 5th edition (Project Management Institute, 2013), specifically in the following Knowledge areas: Stakeholder Management, Communications Management and other areas, such as Project Integration Management, Project Time Management, Project Risk Management and Project Procurement Management.

It is interesting to observe that, four years before the publication of Requirements Management: A Practice Guide, Maritato (2012) had come to similar conclusions on the integration of Business Analysis/Requirement management practices in PMBOK 5th, even if he used BABOKv2 as a reference at the time (**Figure 10**).

2.2.4 PMBOK Guide 6th edition – a game changer?

On 10th August 2017, Project Management Institute uploaded a video on Youtube (Project Management Institute, 2017a), outlining the changes that the new PMBOK Guide – PMBOK 6th edition – will contain.

In this new edition, two Knowledge areas were renamed (Project Schedule Management and Project Resource Management) and some processes were added or changed. Also, there is new content in four knowledge areas (Project Communications Management, Project Risk Management, Project Procurement Management and Project Stakeholder Management).

According to Project Management Institute (2017a), in this new Guide, PMI places a great focus on "*aligning projects to the strategic objectives of the organization*". Thus, we can speculate about the relationship between this new project approach and the Business Analysis Knowledge Areas/domains Strategy Analysis (International Institute of Business Analysis, 2015a) and Needs Assessment (Project Management Institute 2015; 2016). Moreover, the new guide will also tackle business knowledge in project management (Project Management Institute, 2017a).

Having these inputs on the new Guide, the question arises: Will the new content of PMBOK Guide 6th edition create more overlaps between project managers and business analysts? While we cannot know for sure, Project Management Institute explores the relationship between projects managers and business analysts in the Project Scope Management Knowledge area.

In addition, Project Management Institute included a new section on the project manager role, intended to guide project managers on how to successfully lead their projects (Project Management Institute, 2017a).

2.2.5 Thoughts on IIBA and PMI approaches

After reviewing IIBA and PMI approaches, can conclude that when comparing the Bodies Of Knowledge, there are important differences in terms of organization of bodies of knowledge, International Institute of Business Analysis (2015) and Project Management Institute (2013) share some concepts. However, while PMBOK is focused on managing projects, BABOK is focused on explaining the importance and the value of business analysis for an organization.

Also, project Management Institute is investing in Business Analysis/Requirements Management Field (Project Management Institute, 2015: 2016), having Practice Guides dedicated to these matters, as well as a certification (PMI Professional in Business Analysis). Thus, Project Management Institute (2015; 2016) looks for an integration of the business analysis profession in their framework.

When comparing Business Analysis/Requirements Management frameworks from International Institute of Business Analysis (2015) and Project Management Institute, we can find similarities in the knowledge areas/domains described.

On the other hand, the new PMBOK Guide 6TH can be a game changer, once it will tackle the relationship between Project Managers and Business Analysts.

2.3 The challenge of collaboration

According to the Cambridge Dictionary (2017), collaboration is "*the act of working together with other people or organizations to create or achieve something*".

According to Project Management Institute (2016) "*67% of high performing organizations value collaboration between project managers and business analysts*".

Moreover, according to the findings of 2014 PMI Pulse of Profession® In Depth Report, "*52% of organizations expect an increase in the integration of requirements management and business analysts over the next 3 to 5 years and 58% of the organizations are focusing on more defined practices and processes*" (Project Management Institute, 2016).

However, one may think that only one person is able perform both roles. Carkenord (2005) defends the importance of the existence of both Project manager and business analyst, playing different roles because of their different competences and domains that when put together can result in a successful outcome. Project Management Institute (2015) refers that business analysis allows for better requirements; stakeholder engagement; compliance in terms of deadlines, scope and budget; solutions that bring business value and respond to stakeholder needs; and development of organization's skills in Business Analysis.

Thus, the purpose of having both a Project management and Business analysis is to add value to the organization by meeting the project's objectives. These are considered as two strategic roles for nowadays' companies (Maritato, 2012).

Once we have already gone through PMI and IIBA frameworks, what are the practical steps we can take to foster better collaboration between project managers and business analysts?

Due to the differences between project managers and business analysts, Carkenord (2005) suggests that there is a *"healthy tension"* between both roles that makes this partnership work. On the other hand, Wysocki (2011) defends that in order to add value to business, project manager's and business analyst' goals should be fully aligned. Also, Wysocki (2011) and Chan (2011) defend that these two professionals should work in the project from the very beginning to the end.

Chan (2011) also implies that there are overlapping areas between project managers and business analysts. Thus, the author gives advices to Project Managers foster communication and collaboration with Business Analysts. Pullan (2015) also leaves advice Project Managers to foster BA-PM relationship. Thus, a comparison will be established between these two authors.

In terms of aligning Project Management and Business Analysis activities, Pullan (2015) states that Project Managers and Business Analysts should both be leaders, working side by side, exploring the complementarity between these two roles. This way of working can be useful in overlapping areas such as Risk Management and Communications (Carkenord *et al.*; Pullan, 2015). Still, if there are doubts, "*a responsibility assignment matrix (RACI Matrix)*" can be used (Pullan, 2015) to clarify confusion between roles and responsibilities.

To contribute PM-BA relationship, Chan (2011) defends that it is necessary to adopt a good project infrastructure that encourages "*collaboration and communication"*, such as "*project management information systems, facilities and equipment, project standard operations and emergency channels"* (Chan, 2011). On the other hand, Pullan (2015) defends that developing "*a common understanding"* fosters good communication.

Chan (2011) states that there is a need for adapting a flexible approach, because "*there is no single template or methodology that fits all projects*". Also, the author adverts project managers that it is not possible to have a project without issues being essential managing them by working together with the business analyst.

Besides from performing project tasks, Pullan (2015) calls for an open discussion between project managers about their relationship that aims to reach project success. Pullan (2015) got the findings about by exploring PM-BA relationship, the tensions that may arise between them and how to solve them. Thus, the author sent a survey business analysts and project managers around the world about the relationship between both roles. With the survey results, the author listed tensions caused by Project Managers, Business Analysts and the Organization.

In this this survey conducted by Pullan (2015), the large majority of the respondents (124 out of a total of 186 people) were business analysts, followed by project managers (60 people) and business analyst managers (26 people). In this research, it is implied that business analysts might have found the subject more engaging than project managers. According to this author, the findings reveal that project managers seem to be happier than business analysts with the BA-PM relationship. On the other hand, business analysts tend to recognize the issues and tension in the relationship. (Pullan, 2015).

Finally, there is a need for *"clear roles and responsibilities"* for both business Analysts and Project Managers (Carkenord *et al.*, 2010; Pullan, 2015). The organization can have an important influence on the definition of these roles. Also, as stated before, training from professional institutes, such as PMI and IIBA can be relevant (Carkenord, 2005). However, it is also important to note that even these Institutes defend that Project Managers and Business Analysts should adapt their approach according to the project these professionals are working in. Project Management Institute (2013) describes it as "*tailoring*", while International Institute of Business Analysis (2015) refers that "*any set of practices must be tailored to the specific conditions under which business analysis is being performed*".

Chapter III – Methodology

3.1 Context

After reviewing the literature, we can find that the authors reviewed agree on the fact that the goal of both project management and business analysis is to add value to an organization (Carkenord, 2005; Carkenord *et al.*, 2010; Chan, 2011; Wysocki, 2011; Maritato, 2012; James, 2015; Pullan, 2015; Project Management Institute, 2015).

Project Managers and Business analysts should complement each other by working side by side (Chan, 2011; Wysocki, 2011; Maritato, 2012; Pullan, 2015). However, overlaps in tasks can be found between these two roles (Carkenord, 2005; Carkenord *et al.*, 2010; Maritato, 2012; James, 2015; Pullan, 2015; Project Management Institute, 2016) that can lead to confusion between business analysis and project management. In order to achieve project success, roles and responsibilities should be clear (Pullan, 2015; Carkenord *et al.*, 2010). Thus, Institutes such as PMI and IIBA can be relevant in defining roles and responsibilities of both professionals (Carkenord, 2005).

In terms of framework promoted by these two Institutes, we can see that they share some concepts, even if the framework is not the same. After all, IIBA was built very closely to PMI (James, 2015). Still, PMI is investing both the profession of Business Analysis and on the collaboration between project managers and business analysts. The PMBOK 6th Guide can be a game changer on these matters.

However, not only Institutes that care about the collaboration between. In fact, according to Project Management Institute (2016), "*67% of high performing organizations value collaboration between project managers and business analysts*". Thus, in this research a company was chosen to conduct a research on Project Managers and Business analysts – Cofidis Portugal. This way, real world data is used for this research.

As we have seen, Pullan (2015) conducted a survey on "*Project Management/Business Analyst friction*". Nonetheless, in this survey, only project managers and business analysts are questioned.

We can notice a trend in which the PM/BA-PM relationship is analyzed through project management lenses (Carkenord et al., 2010; Chan, 2011; Pullan, 2015), aiming at advising project managers on how to work with business analysts. Also, some authors have put an effort on integrating Business Analysis practices into Project Management Institute's framework (Maritato, 2012; Project; Project Management Institute, 2016). This may be explained by the fact that business analysis is not as widely known as project management in the project industry Paul *et al.*, 2014; James, 2015; Pullan, 2015).

However, none of the authors explored how both project managers and business analysis are seen by every project team member. This is critical because these professionals do not work isolated, but in a team.

Thus, this research intends to show a 360º overview of the role of project manager and business analyst. This means that the perspective of the reality shown in this research is not only from the project manager or business analyst's point of view, but from all project stakeholders' point of view. Only this way we can find a both integrative and inclusive overview on how project managers and business analysts interact in a project context.

Ultimately, this research aims to understand how business analysis and project management are perceived at Cofidis Portugal and which are the improvement measures could be implemented in the name of project success.

3.2 Research questions

RQ1: Are the roles and responsibilities of both project managers and business analysts clear?

As we have seen, there is a need for *"clear roles and responsibilities"* for both business Analysts and Project Managers (Carkenord *et al.*, 2010; Pullan, 2015).

The goal of this research question is to find out whether the roles and responsibilities of both business analysts and project managers are standardized across all the stakeholders.

 RQ2: How is the relationship between these two roles perceived by each stakeholder?

According to Project Management Institute (2016) *"67% of high performing organizations value collaboration between project managers and business analysts"*.

This means the interaction between project managers and business analyst is an issue to take in account. Thus, this research question aims at finding out how the relationship between project managers and business analysts is perceived.

RQ3: Which are the improvement opportunities regarding the process or the role?
Finally, the last research questions aim at pointing out tips for the improvement of both project management and business analysis at Cofidis Portugal.

3.3 Target chosen

The target for this survey is is professionals who have worked at least in the last 6 months in projects at Cofidis Portugal. More specifically, this survey is aimed at:
- Business Analysts
- Project Managers
- Testers
- Continuous improvement team members
- IT technicians (Software architects, developers, BIs)
- Business areas

The online survey was sent to Cofidis employees who have been listed as project resources for the last 6 months. This way, we can have an overview on how people from different teams perceive project managers and business analysts.

Cofidis Portugal is a financial services company. Founded in 1966, it is specialized in consumer credit. Among its products, we can find personal credits, credit lines, credit cards, automobile credits and consolidated credits.

This company states its mission as the following: "*To contribute for the improvement of quality of living of our customers, through the development and management of a product portfolio that aims at offering the best solution to satisfy our clients' needs as well as making the aspirations of every individual come true*". In terms of values, Cofidis has five: "*Agility, Audacity, Simplicity, Responsibility, Consideration*". (Cofidis, 2017a.)

Cofidis Portugal is part Groupe Cofidis Participations, specialized in distance credit. Besides Portugal, we can find Cofidis in eight other European countries: Spain, France, Belgium, Italy, Czech Republic, Slovakia, Hungary and Poland. (Cofidis, 2017b)
Cofidis Participations' main stockholder is Crédit Mutuel, considered as the best French banking group in 2016 by World Finance (Crédit Mutuel, 2017). In 2016, Cofidis Portugal had 624 employees, 474.043 customers and a business volume of 172.361.115€ (Cofidis, 2017c).

At Cofidis, both Project Management and Business Analysis professionals work under the same Department, together with the Continuous Improvement team and Tests and Quality team.

Both Project Management and Business Analysis have had contact with PMI and IIBA frameworks. In fact, in 2014, Project Management at Cofidis was awarded by PMI Portugal Chapter as the Best PMO in Portugal. As for business analysis, the whole team got training on BABOK v3 in 2017.

3.4 Approach

The technique used to conduct this research was an online survey, using *Typeform*, a survey platform. The survey was shared by email between 10 and 18th July 2017.

The online survey was used because it is the easiest way to collect answers in a short period of time as well as it provides a data extraction functionality that allow the researcher to integrate the survey findings directly in a data analysis software (Ilieva *et al.*, 2003).

In terms of methodology, the approach used to conduct this research was Mixed Methods Research, also named "*multimethodology*" (Harper, 2013), which combines qualitative and quantitative approaches in a research. According to Creswell and Clark (2011), combining these two approaches allows for a deeper knowledge of the research questions. In this case, both qualitative and quantitative data was collected in the online survey.

In terms of qualitative approach both close-ended and open ended questions were used. On the other hand, in quantitate approach, only close-ended questions were used.

In quantitative questions, 5-point Likert-type items were used. Using this tool, the respondents can choose one out of five scale positions that best explains what they feel about the subject that has been asked. The scale comes along with a statement that describes what each point means.

Likert scales are used to measure *"people's attitudes, beliefs, emotions, feelings, perceptions, personality characteristics, and other psychological constructs"* (Lewis-Beck *et al.*, 2004). The main difference between Likert scales and Likert type items is that a Likert scale is composed by several items or questions, while a Likert item is only composed by *"one item or question"* (Uebersax, 2006).

The findings from qualitative data collected are displayed in a form of bar charts, stacked charts, pie chart and visual displays. As for qualitative data collected, this type of data is only displayed in staked charts.

In the next section, the survey questions will be explored in detail.

3.5 Research design

This section will describe the way this research was designed, as well as the goal behind each question.

The questionnaire was made in Portuguese because of the respondents' mother language.

Figure 13 shows the relation between research questions and survey questions.

Research question	Survey questions
RQ1	Q4, Q5, Q6, Q7, Q11, Q12
RQ2	Q8, Q9, Q10
RQ3	Q13, Q14

Figure 13 – Mapping the research questions to survey questions [self-constructed]

The questions described in the table above were all mandatory. Some questions referred acronyms specifically used at Cofidis (such as SAF, PMO, DSI). For research purposes, these were replaced by commonly understandable terms.

The detailed goals behind the survey questions are described below:

Q1: Are you an internal employee or an outsourcing employee?

This question was meant to identify the respondent. Cofidis integrates both internal and outsourcing employees across different areas. However, this company doesn't make any distinction in treatment between these two types of employees

Q2: In a Cofidis Project, in which are do you work?

The goal of this question was again to identify the respondents. However, is it important to note that, at Cofidis:

- Project Management sector (officially called PMO) [1]; Business Analysis sector (officially called SAF – Serviço de Análise Funcional, which is divided into two different teams); Tests and Quality sector and Continuous Improvement team are under the same Department - Organization Department (DO - Direção de Organização);
- The technical area consists of professionals under the Information System Department (DSI – Direção de Sistemas de Informção). They can have the following roles:
  - Developers;
  - Software architects;
  - Business Intelligence (BI) analysts.
- Business areas include Cofidis employees from all the functional (essential for the business, such as Customer Service Department) and non-functional areas (such as as Legal Department) that participate in projects.

Q3: How many years of experience do you have in your current role?

This question was meant to quantify the years of experience the respondents have.

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[1] *Project Management Institute (2013) classifies PMO, as "Project Management Office", a "management structure". However, whenever PMO is mentioned in this research, we refer it to Project Managers and not to the "management structure".*

Q4: In your current reality, which of the following tasks does a project management perform?

Q5: In your current reality, which of the following tasks does a business analyst perform?

These two multiple-choice questions aimed at finding out how Project Manager (Q4) and Business Analyst (Q5) are perceived at Cofidis. For that purpose, six options were available:

- Manage scope, budget, resources, risk, schedule and project's quality – identified as Project Manager's tasks (Project Management Institute, 2013)
- Elicit requirements - identified as Business Analyst tasks (International Institute of Business Analysis, 2015; Project Management Institute, 2015).
- Test the software – Tester task (International Institute of Business Analysis, 2015a);
- Build the software – Implementation Subject Matter Expert, " *(…) such as solution architect, developer, database administrator, information architect (…)"*(International Institute of Business Analysis, 2015a);
- Design and recommend solutions according to stakeholder's needs identified as Business Analyst tasks (International Institute of Business Analysis, 2015; Project Management Institute, 2015);
- Ensure that the project meets its goals - Project Manager's task (Project Management Institute, 2013).

With these questions' answers, we can understand if the perception of business analysis and project management is standardized across all the stakeholders. Also, we can check whether the perception of these goals are aligned with the good practices promoted by the PMI and IIBA.

Q6: How do you evaluate the tasks of both business analyst and project manager?

The aim of this question is to understand the degree of definition of the tasks of both business analysts and project manager.

Q7: Justify your answer to the previous question

This question is an open question. Since the previous question concerns both roles, this question serves to elaborate more on the degree of alignment of the tasks of the project manager and business analyst.

Q8: Select the options you consider as correct according to your current reality

This is a multiple-choice question that allows for multiple answers. The goal of this question is to find out the perceptions on:

- How related are project manager and business analyst roles;
- The value these two roles bring;
- Their place in the hierarchy.

Thus, six statements are presented (two from each subtopic).

Q9: How do you classify the relationship between the project manager and the business analyst (PM-BA/BA-PM)?

This question aims to quantify the quality of relationship between the project manager and the business analyst from 1 (very unaligned) to 5 (very aligned).

Q10: In your opinion, the relationship between the project manager and the business analyst affects the deliverable's quality (PM-BA/BA-PM)?

This question's goal is to find that in what extent the PM-BA relationship affects the deliverables' quality, from 1 (it doesn't affect) to 5 (affects a lot).

Q11: In your opinion, what would be the impact if there wasn't any business analyst in a project? (open question)

Q12: In your opinion, what would be the impact if there wasn't any project management in a project? (open question)

These question is aimed at finding out the perceived value of business analysis (Q11) project management (Q12) at Cofidis Portugal.

Q13: In your opinion, which are the three main points to be considered to improve Business Analysis sector? (open question)

Q14: In your opinion, which are the three main points to be considered to improve Project Management Sector? (open question)

These two questions aim at finding out the improvement points that can be implemented in both Business Analyst (Q13) and Project Management (Q14) sectors.

Q15: Leave here your comments/feedback about this survey (non-required question/open question)

Finally, this last question is option and allows respondents to leave comments about the survey.

3.6 Pilot testing: Pretesting

According to Cooper and Shindler (2014), "*the research project typically begins with pilot testing*". There are many types of pilot testing (Cooper & Shindler, 2014), but the one used in this research was pretesting. The idea of pretesting is to confirm that the instrument and methodology used by the researcher makes sense to other people. In pretesting, the target can vary from people from people outside the research to people who will be part of the research. In this research, pretesting was done with people with who were part of the target of this research.

Therefore, before the survey was officially released and shared with all the inquired people, six different people were asked for their opinion on the survey. This was very useful because correct minor mistakes in question formulation were spotted and corrected.

The final version of the survey can be found in **Appendix II**.

Chapter IV – Findings

In this chapter, the findings of the online survey are described. This chapter was organized into seven sections: The respondents (findings on identification questions), Project Management roles and responsibilities (findings on task definition), Perceptions on the value of project manager and business analyst, Perceptions on Project Manager-Business Analyst/Business Analyst –Project Manager relationship, Improvement areas**,** Comments/Feedback and Key findings (summary of the most relevant findings). The correspondence between the way this chapter is organized, the survey questions and the research questions can be found below, in **Figure 14**.

Findings section	Survey question	Research question
4.1	Q1, Q2, Q3	-
4.2	Q4, Q5, Q6, Q7	RQ1
4.3	Q11, Q12	RQ1
4.4	Q8, Q9, Q10	RQ2
4.5	Q13, Q14	RQ3
4.6	Q15	-

Figure 14 – Mapping the findings section to survey and research questions [self-constructed]

Two types of charts are used to illustrate these findings: stacked bar charts and a pie chart. In this research, stacked bar charts are used to compare the answers from six different respondent types (business areas, IT team, continuous improvement, testers, business analysts and project managers). Thus, in these charts, we can observe:

- The possible answers from the survey (in y axis);

- The number of answers (in x axis);

- The percentage associated to the number of answers:

    - In **4.1.1**, we can observe a stacked chart the percentage of each type of employee that answered the question;

    - In the other stacked charts, we can observe the total percentage of the selected answer in front of each bar.

A pie chart is used in section 4.6 to analyze the comments and feedback given by the respondents.

4.1 The respondents

This section will describe the findings on the identification of the respondent. In this section, we analyze the survey questions **Q1, Q2** and **Q3** (explained in the precious chapter).

4.1.1. Number of respondents

Out of 76 people inquired, this survey got 57 answers. This means that ¾ of the target have responded to this survey, as can be seen in **Figure 15.**
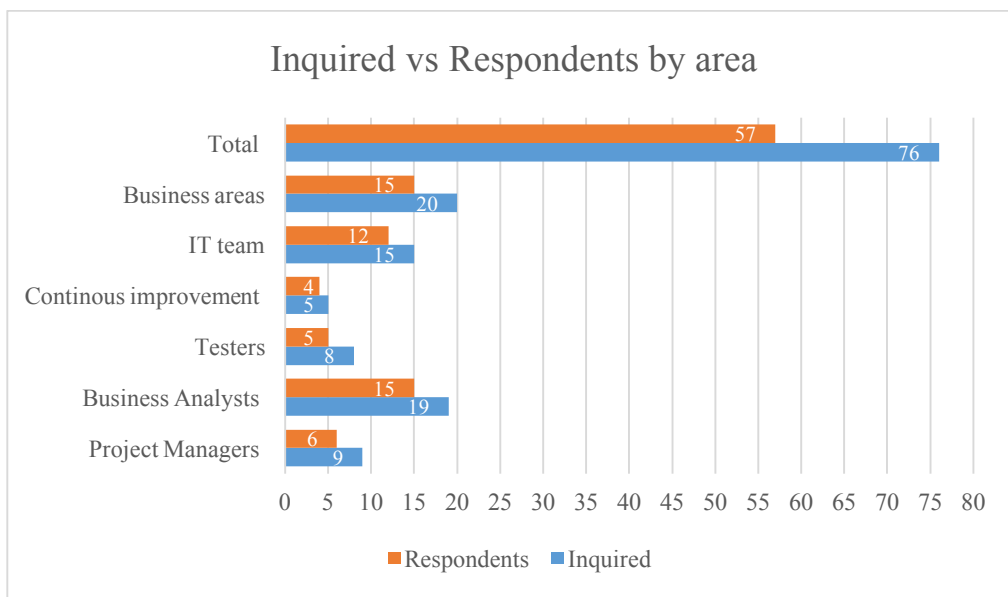

Figure 15 – Inquired vs respondents per area [self-constructed]

The **Figure 16** shows the people surveyed by area as well as the correspondent percentage of internal and outsourcing employees.

Cofidis has both internal and outsourcing employees. As can be seen in the **Figure 16**, while there are no outsourcing employees in business areas and continuous improvement, there are outsourcings in other areas

In total, most the respondents (82%) are internal employees, while only 18% are outsourcing employees.
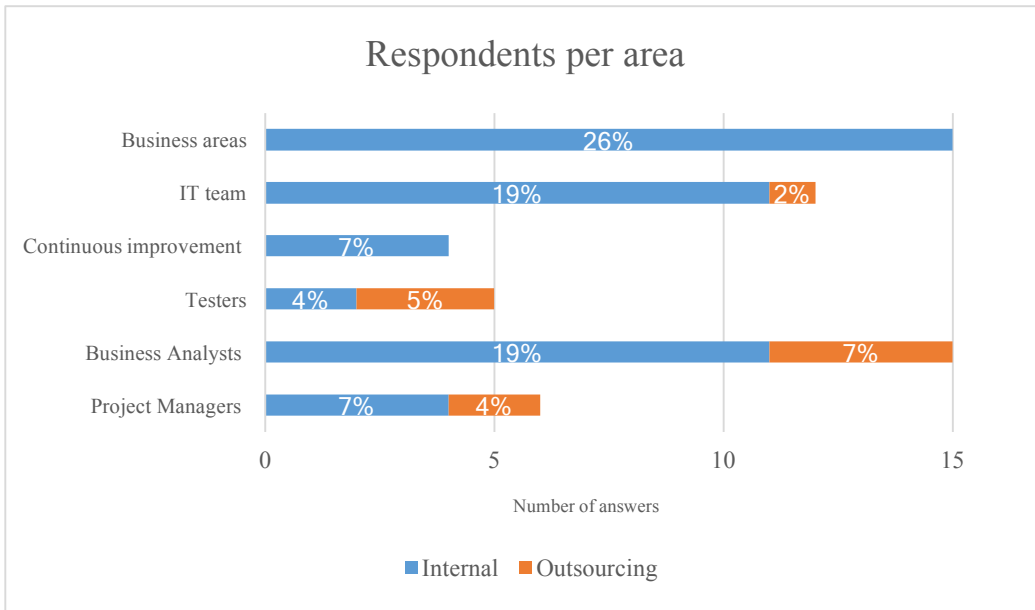
Figure 16 – Respondents per area [self-constructed]

4.1.2 Years of experience

Concerning experience, people surveyed from business areas and IT tend to be more experienced. In fact, 12 out of 12 respondents from the IT team have 5 or more years of experience and only one person from business areas has between 2 and 4 years of experience, while the rest of the respondents from business areas have 5 or more years of experience.

These findings can be observed in **Figure 17**.

Figure 17 – Years of experience [self-constructed]

Project Managers and Continuous improvement team are not as experienced as the other professionals. Only one professional in each of these areas has 5 or more years of experience.
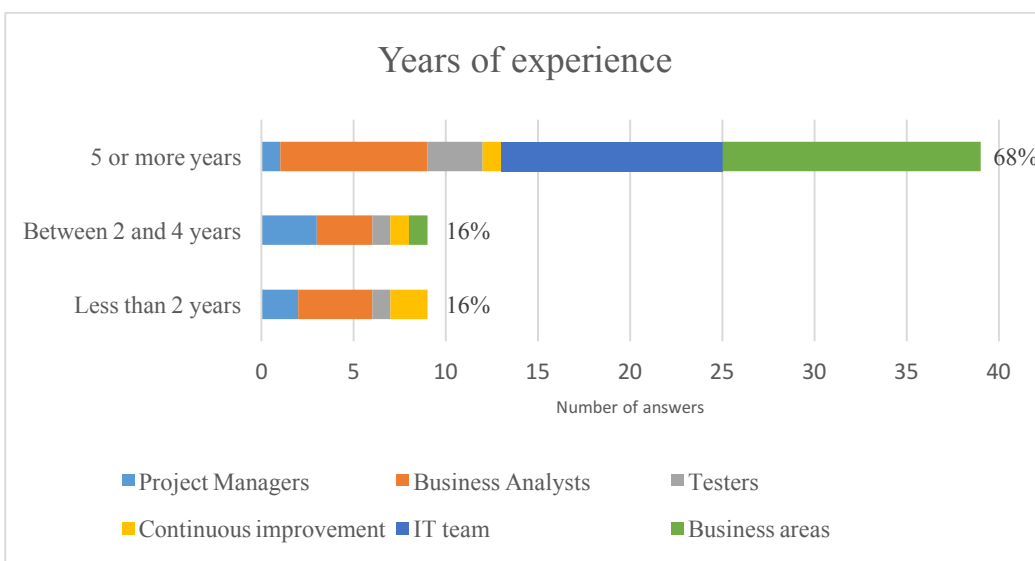
As for the Business Analysts, 8 people have 5 or more years of experience; 3 people have between 2 and 4 years of experience; and 4 people have less than 2 years of experience.

In general, more than a half of the people surveyed (68%) have 5 or more years of experience and 32% of the respondents have 4 or less years of experience.

4.2 Project Manager and Business analyst roles and responsibilities

In this section, we tackle project manager and business analyst tasks and the respondents' perception on the definition of these. This analysis relates to questions **Q4, Q5, Q6, Q7.**

4.2.1 – Project manager tasks

As stated before, this was a question that allowed for multiple answers. Therefore although 57 people responded to this survey (as we have seen in 4.1), the total of answers accounted for 87 answers. Also, the average number of answers that a respondent selected was 1,5 answers.

To analyze the data, first we will look at the general results and then we will move to detail. The stacked graph (**Figure 18**) bellow illustrates the general results.
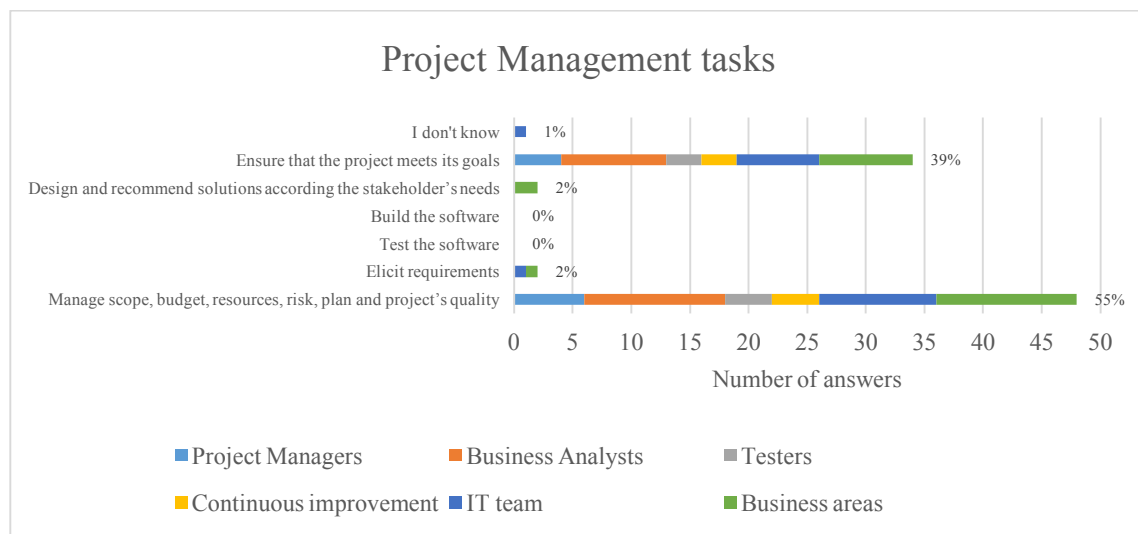

Figure 18 – Project Management tasks [self-constructed]

From 87 answers, the majority (55%) fell on "Manage scope, budget, resources, Risk, plan and project's quality".

Secondly, 39% of the answers were "Ensure that the project meets its goals".

When taking a closer look to the answers, we can see that 42% of the respondents selected both "Manage scope, budget, resources, risk and project's quality" and "Ensure the project meets its goals", which were the appointed answers for this question.

Only 5% of the answers were different from the two options already mentioned. These answers belong to Business areas (3%) and IT teams (2%). However, as we have seen in the literature review, according to Project Management Institute (2013), one may argue that Requirements elicitation is part of project manager's tasks.

Finally, both business analysts and project managers share similar ideas concerning PM tasks. Only few answers (4) from IT team and business areas reveal that people have a different opinion about the tasks performed by the PM. Also, only one respondent from the IT team selected "I don't know".

4.2.2 - Business analyst tasks

This question allowed for multiple answers. Thus, this question had 102 answers in total. The average number of answers that a respondent selected was 1,7 per respondent. The chart below (**Figure 19**) shows the general results for the total of 102 answers.
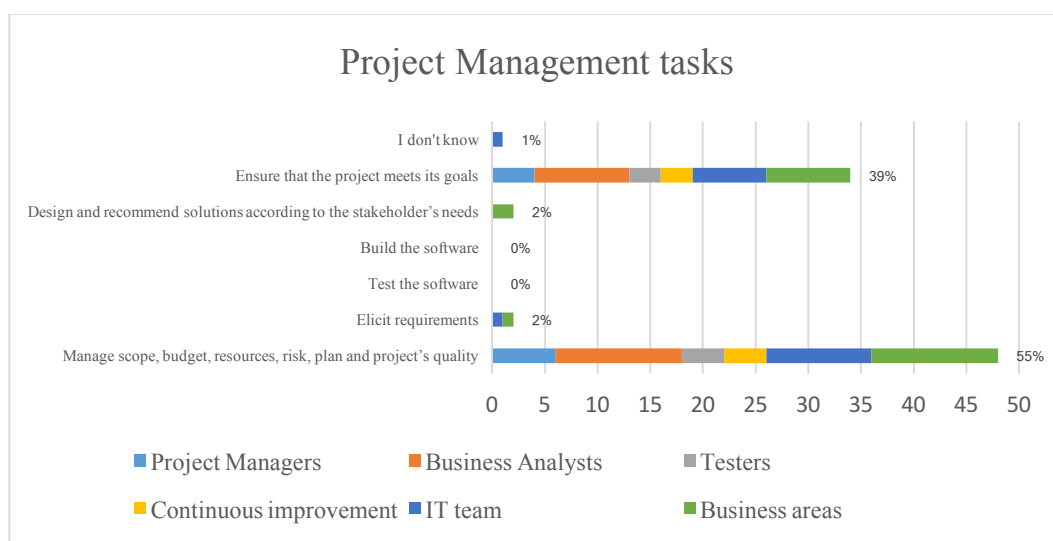

Figure 19 – Business analysis tasks [self-constructed]

Regarding BA role tasks, most answers fell on Design and recommend solutions according to the stakeholder's needs (38%) and Elicit requirements (41%). The majority of the answers from each area fall in these two categories.

When taking a closer analysis to this data, we can observe that 29 out of 87 respondents selected both options. From these 29 respondents, 11 also selected other options, such as "Ensure that the project meets its goals" (8), "Test the software" (4) and "Manage scope, budget, resources, risk, plan and schedule" (1).

We can also observe that the answers of Business Analysts about the tasks they perform. The biggest number of answers from Business Analysts consist in "Design and recommend solutions according to the stakeholder's needs" (14), followed by "Elicit Requirements" (12). Also, 5 Business analysts selected the option "Ensure that the project meets its goals. In addition, Business analysts also selected "Manage score, budget, resources, risk, plan and project quality" (1) and "Test the software (1).

As for project managers, they agree that a Business analyst designs and recommend solutions according to the stakeholder's needs (6) and elicit the requirements (4). One project manager believes that a business analyst ensures that a project meets its goals.

Only 2% of the respondents indicated that they don't know the tasks business analysts perform, one tester and one person from a business area.

4.2.3 Task definition

The most chosen option was "neutral", followed by "defined". The average score in terms of task definition is 3,4. The results are shown in the **Figure 20**.

It is interesting to observe that while PMs consider the roles to be "defined" (2) or "neutral" (4), Business Analyst consider them "neutral" (8), "defined" (5) or "not defined" (2). No project manager considers PM and BA tasks as "not defined".
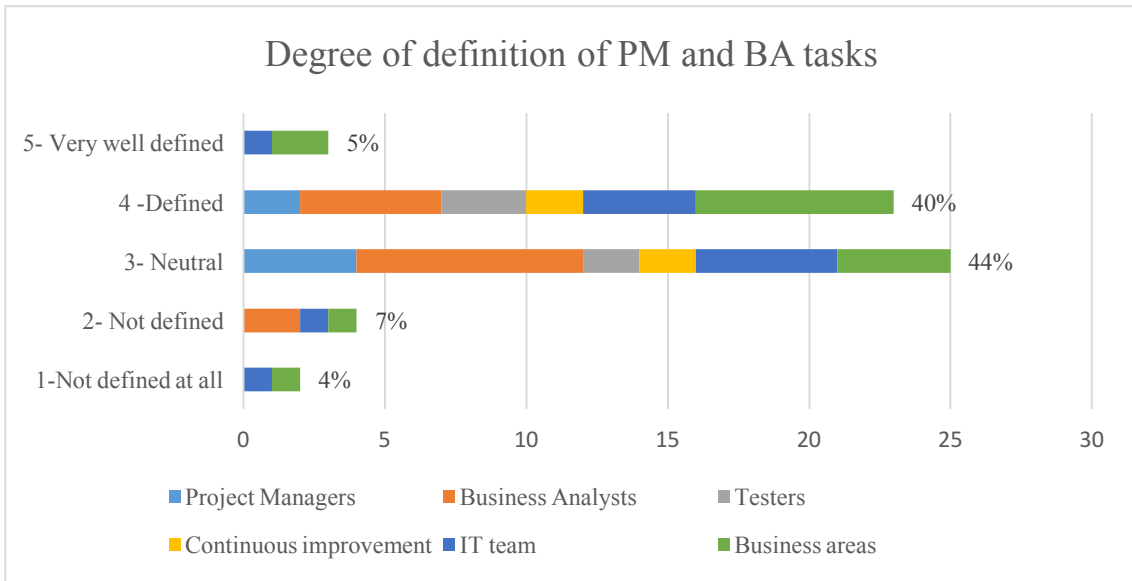
Figure 20 – Degree of definition of PM and BA tasks [self-constructed]

Whereas Testers and Continuous improvement team classify the definition of PM and BA tasks as defined and neutral, business areas and IT placed their answers in every score, with predominance in 4 and 3.

When the respondents are asked why they rated the roles as they did, the majority agree on the fact that "There are overlaps" (23%) , followed by "the roles are defined" (14%) and "The roles are defined, but there's need for improvement" (7%). The answers given by the respondents are categorized in **Figure 21**.

Figure 21– Perceptions of the degree of definition of PM and BA tasks [self-constructed]

Also, Business areas and IT team indicate that "There is a lack of focus in monitoring and business knowledge" (7%).

The respondents have expressed their opinions on the definition of roles of each professional. In fact, 5% of the respondents believe that the BA role is not well defined. Other 5% believe that PM role 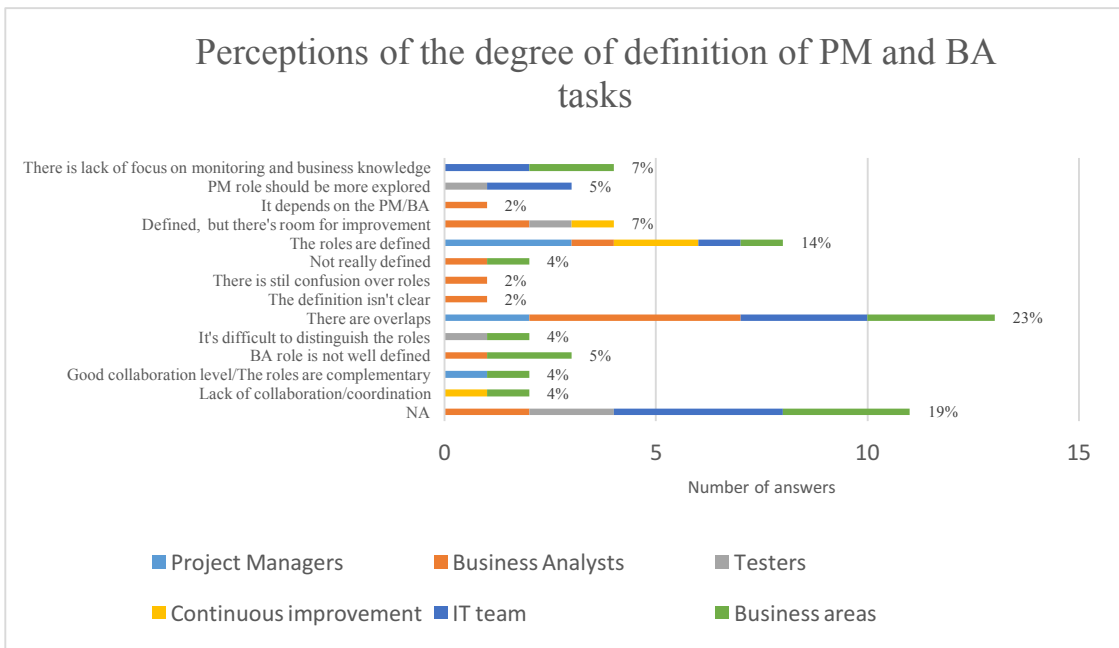should be more explored. While there is one business analyst who believes that the definition of the BA role is not good enough, no project manager believes that its role should be more explored.

Project managers divide their answers into "The roles are defined" (3), "There are overlaps (2) and "Good collaboration/the roles are complementary" (1). No Business analyst referred the last answer. Business analysts dived their answers into "There are overlaps" (5), "Not Applicable" (2), "Defined, but there is room for improvement" (2), "BA is not well defined" (1), "The definition isn't clear" (1), "There is still confusion over roles" (1), "Not really defined" (1) , "The roles are defined (1)", "It depends on the PM/BA" (1).

4.3 Perceptions of the value of Project Managers and Business Analysts

This section tackles the perception on the value of Project Managers and Business Analysts and relates to **Q11 and Q12.**

4.3.1 Perceptions of complementarity, value and hierarchy

This question also allowed multiple selections. This way, the total of answers accounted for 143. Also, the average number of answers that a respondent selected was 2,5 answers per respondent.

When asked to select the answers that they consider as true, the most selected answer is "Project management and business analysis are complementary areas" (34%). Project Managers divided their answers between these three options. However, Business analysts' answers followed a different pattern. One business analyst believes that project management and business analysis are not related and two Business Analysts didn't get

the difference between business analysis and project management, while no project manager selected that option. The answers are shown in **Figure 22**.
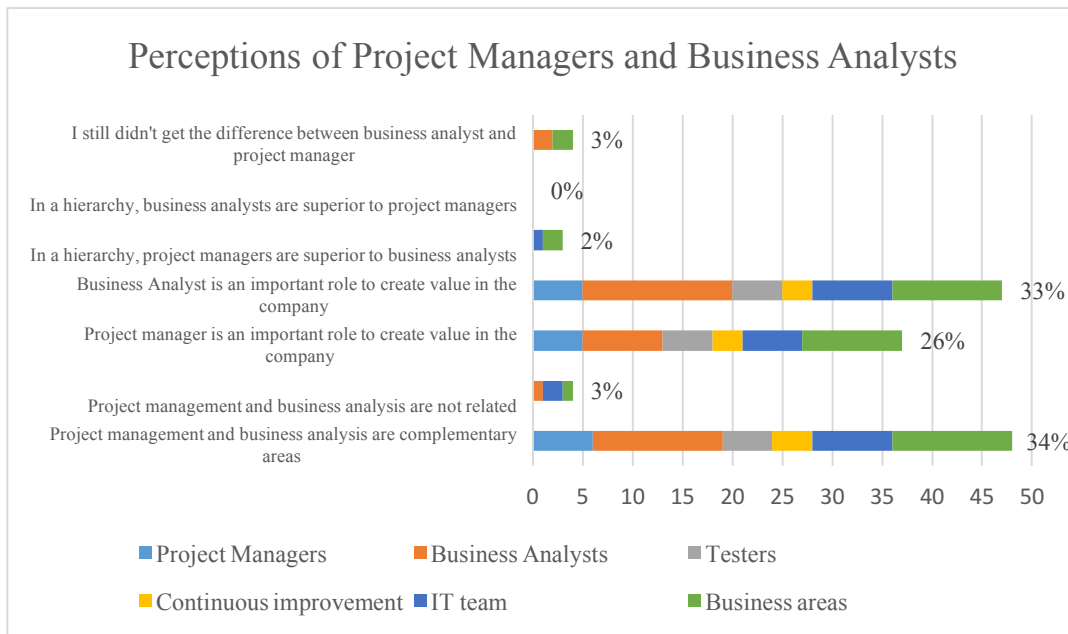
Figure 22– Perceptions of Project Managers and Business Analysts [self-constructed]

When taking a closer look to the results, 10 out of 15 business analysts selected the option saying that business analysis creates value to the company and 8 of them also defended that project management creates value. As for project managers, 5 out of 6 believe that both business analysts and project managers create value.

Overall, 3% of the respondents don't know the difference between business analysis and project management. Besides the two business analysts, two people from business areas also don't know the difference between a business analyst and a project manager. Regarding the options on hierarchy, no one selected "In a hierarchy, business analysts are superior to project managers". On the other hand, 2% the option "In a hierarchy, project managers are superior to business analysts" was selected 3 times by IT (1) and Business areas (2).

4.3.2 Perceptions of the value of business analysis

The impacts referred by the respondents can be found divided in categories in **Figure 23.**
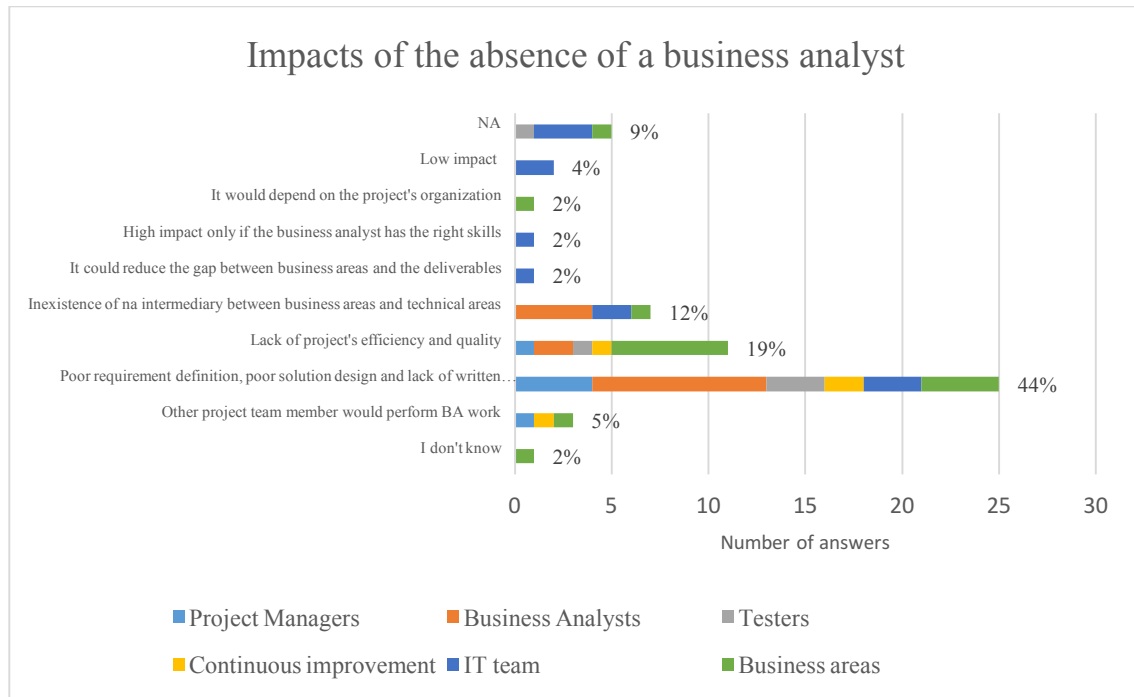
Figure 23– Impacts on the absence of a business analyst [self-constructed]

When asked about the impacts on the absence of a business analyst, the majority of people believe that a project with no BA brings poor requirement definition, poor solution design and lack of documentation (44%), followed by lack of project's efficiency and quality (19%) and "Inexistence of an intermediary between business areas and technical areas" (12%).

Business analysts' answers are divided between "Poor requirement definition" (9), "Inexistence of an intermediary between business areas and technical areas (4)" and "Lack of project inefficiency and quality (2). As for project managers, the most selected answers were "Poor requirement definition" (4), "Lack of project inefficiency and quality (1) and "Other team members would perform BA work".

Through the stacked chart, we can also observe that 4 out of 9 respondents with valid answers from the IT team (the respondents are 12, but 3 have answered "Not Applicable" to this question) consider that the impact is high only when the business analyst has the right skills (1), that the impact is low (2) or that an absence of a business analyst "could reduce the gap between business areas and the deliverables" (1).

47

Finally, only one person from business areas doesn't know the impact of having no BA, while 5 people answered, "Not applicable".

4.3.3 Perceptions of the value of project Management

When asked about the impacts of the absence of a project management, most people referred that there would be a lack of planning, monitoring and resource allocation, along with the inability to meet the project's deadlines.
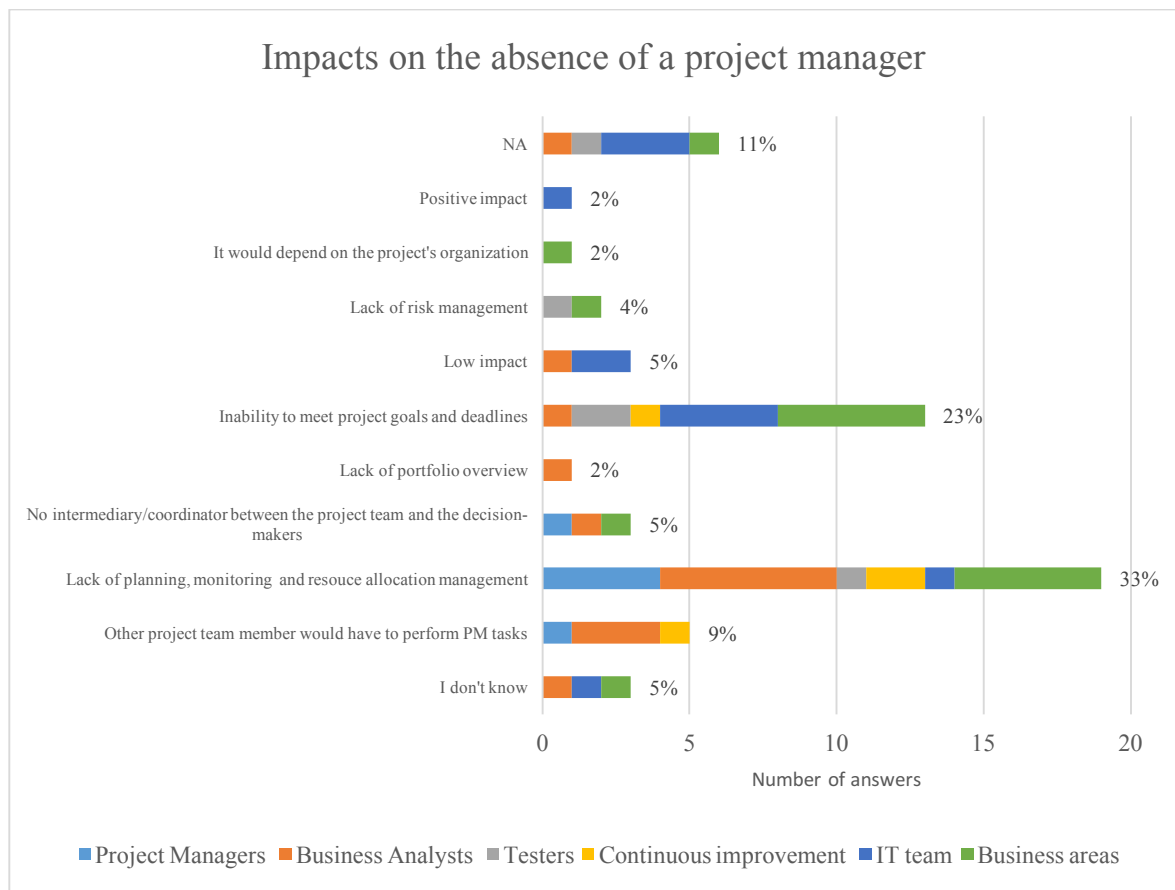
Figure 24– Impacts on the absence of a project manager [self-constructed]

When looking at the results, we can see that while project managers referred "Lack of planning, monitoring and resource allocation" (4), "Other project team member would have to perform PM tasks" and "No intermediary/coordinator between the project team and the decision-makers" (1). Business analysts agree on the "lack of planning, monitoring and resource allocation" (6), "Other project team member would have to perform PM tasks. Business analysts also selected "Inability to meet goals and deadlines" (1) , "Lack of portfolio overview" (1), "Low impact" (1) and I don't know (1).

Despite of the fact that most of the answers denote that a project manager is important in a project, 6% of the answers say there is a low impact (1 Business analyst and 2 people from the IT team) and a positive impact (1 person from the IT team).

Also, the percentage is "Not applicable" answers is 11%, while "I don't know" answers account for 5%.

4.4 Perceptions of the PM-BA/BA-PM relationship

This section tackles the relationship between the project manager and the business analyst and its impact on deliverables.

4.4.1 Relationship between the PM and the BA (PM-BA/BA-PM)

Most of the respondents considered the relationship as neutral (54%), as we can see in **Figure 25**.
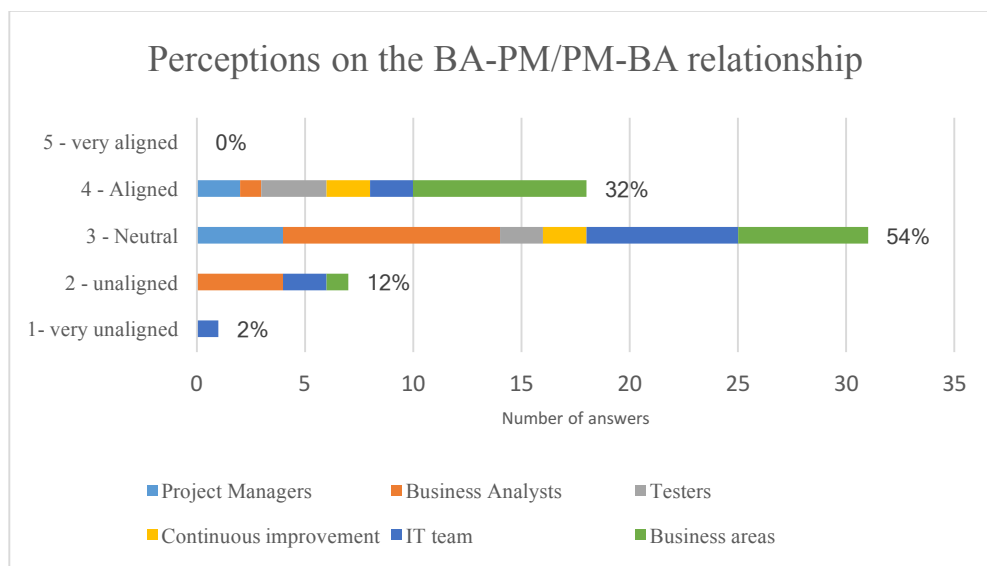
Figure 25– Perceptions on the BA-PM/PM-BA relationship[self-constructed]

The average score for the de degree of alignment between the PM and the BA (PM-BA/BA-PM) is 3,3.

However, the pattern observed in question on task definition is repeated here. While PMs consider the relationship neutral (4) and aligned (2), BAs perceived as neutral (10), unaligned (4) and aligned (1).

None of the respondents considered the relationship very aligned.

4.4.2 Impact on deliverables

On a scale from 1 to 5, the average was 3,8, meaning very close to the option "It affects".

The majority of the respondents believe that the BA-PM relationship affects the deliverables quality (39%). The findings can be found in **Figure 26**.
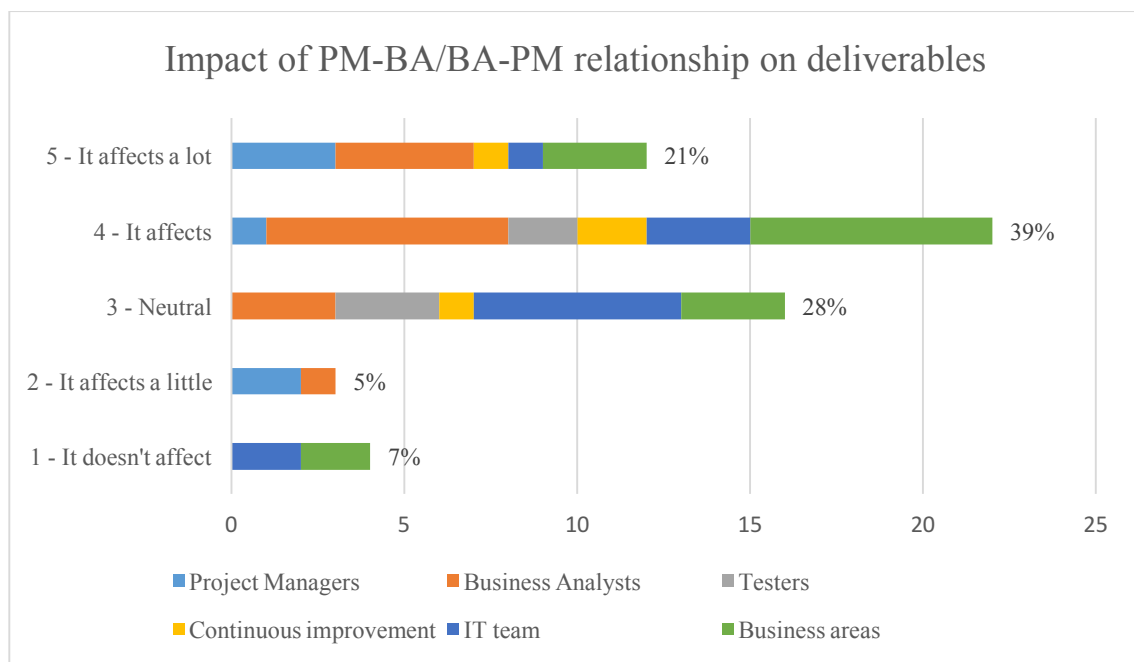
Figure 26– Impact of PM-BA/BA-PM relationship on deliverables [self-constructed]

Only 7% believe that the relationship doesn't affect the quality of the deliverables. However, these people are not project managers or business analysts.

Through **Figure 26**, we can observe that no project management chose the option neutral, while 3 Business analysts chose that option.

People from IT team (2) and Business area (2) believe that the PM-BA/PM-BA relationship doesn't have any impact on the deliverables.

4.5 Improvement areas

This section introduces the opportunities of improvement mentioned by the survey's respondents. These opportunities apply to the project manager and the business analysis sector. The survey questions related to this section are **Q13** and **Q14**.

4.5.1 Project Management

Question **Q13** asked for three improvement points. This question had 105 answers, meaning that, in average, a respondent gave 1, 8 answers.

The opportunities are categorized in the **Figure 27**.
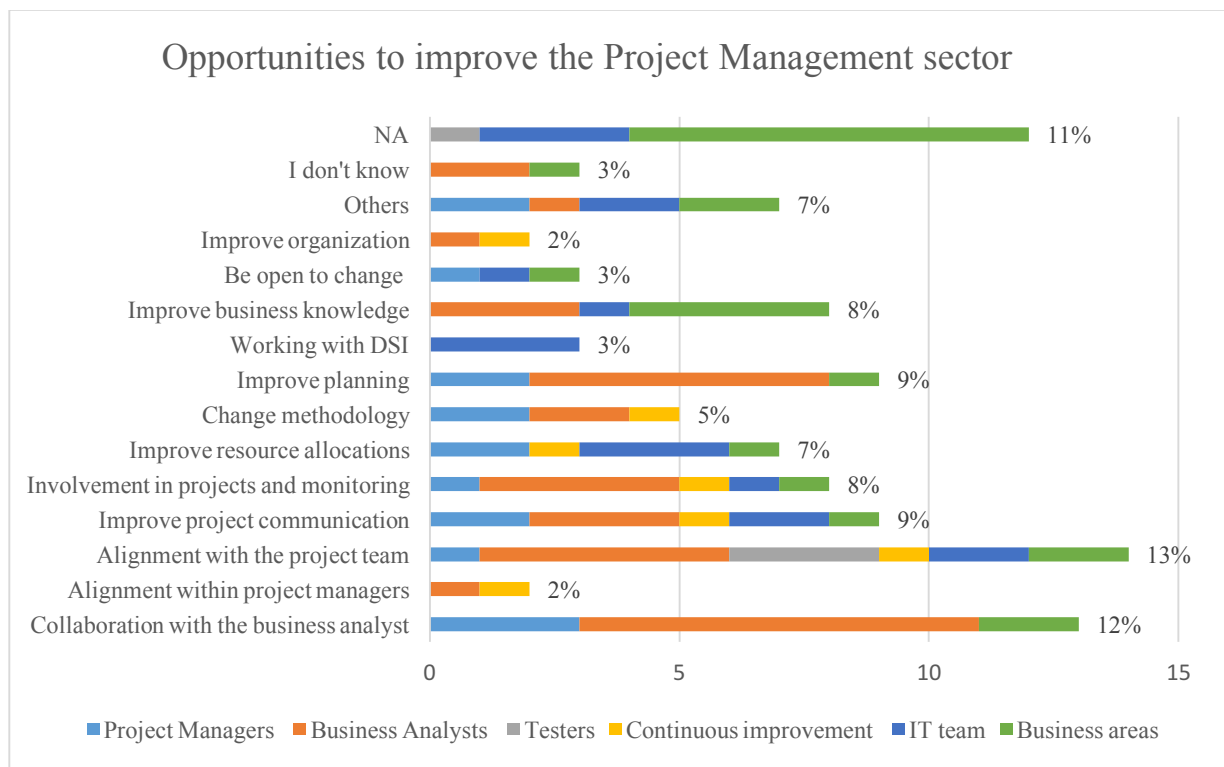
Figure 27 – Opportunities to improve the Project Management sector [self-constructed]

Although 11% of the answers were classified as "Not Applicable", the most referred answer was "Alignment with the project team" (13%), followed by "Collaboration with the business analyst" (12%). These opportunities were referred by project managers, along with other areas.

The answers categorized as "Others" were the opportunities only suggested by one person. These can be observed in **Figure 28**.
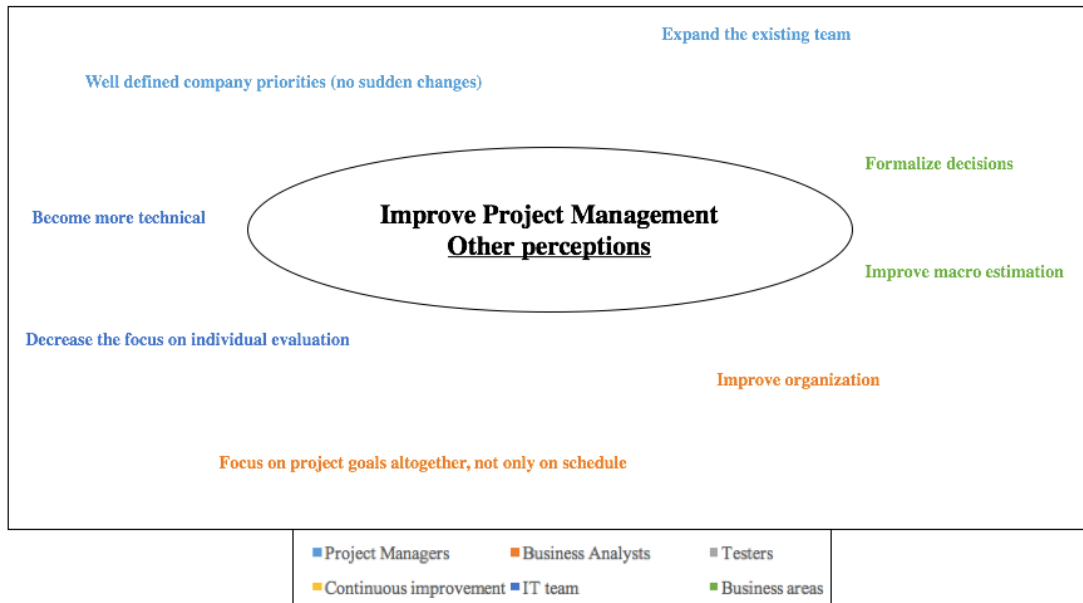
Figure 28 –Other perceptions on how to improve the Project Management sector [self-constructed]

4.5.2 Business Analysis

In terms of improvement measures for Business analysis, they were diverse.

Although the question **Q14** asked for three improvement opportunities, the question got 123 answers, meaning that, in average, a respondent gave 2,2 answers.

Popular tips include "Improve business knowledge" (11%), "Collaboration and alignment the project team" (11%) and "Working with DSI" (7%).

Besides the category "others", the most referred improvement opportunity by business analysts was "Collaboration and alignment with the project team" (7) , while the most referred answer by project managers was "Objectivity and rigorousness in requirements elicitation" (5)

The different inputs given by the respondents can be found in **Figure XXIX**.
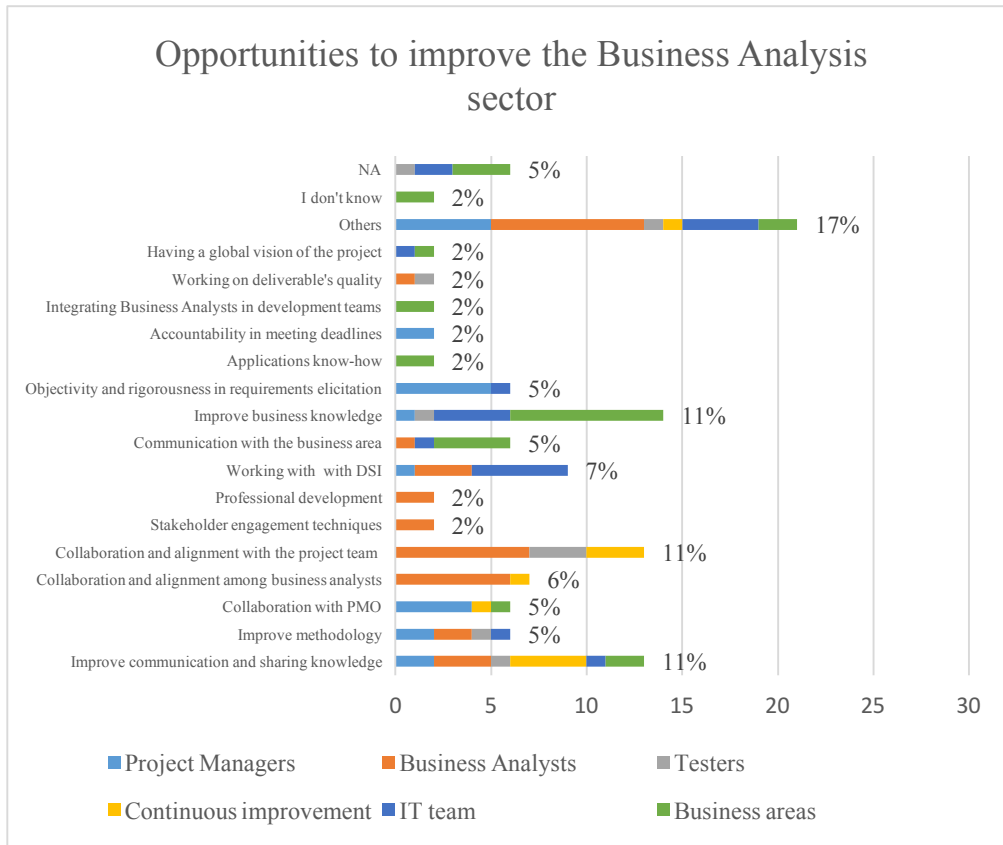
Figure 29 – Opportunities to improve the Business Analysis sector [self-constructed]

Most answers are placed (17%) in the category "others". This corresponds to the opportunities that were only mentioned once. These can be observed in **Figure 30**.
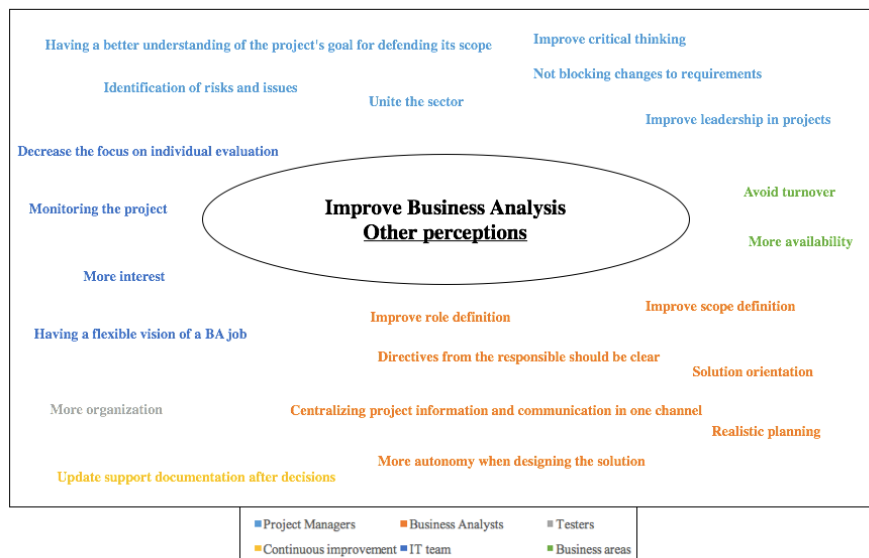
Figure 30 –Other perceptions on how to improve the Business Analysis sector [self-constructed]

53

4.6 Comments/Feedback

The question on comments/feedback about the survey was not mandatory. Anyway, 25 out of 57 respondents answered to this question. The majority thought that the survey was well structured (10%), followed by those who though it was a good initiative (9%) and those who though that this survey should include other areas as well (9%).
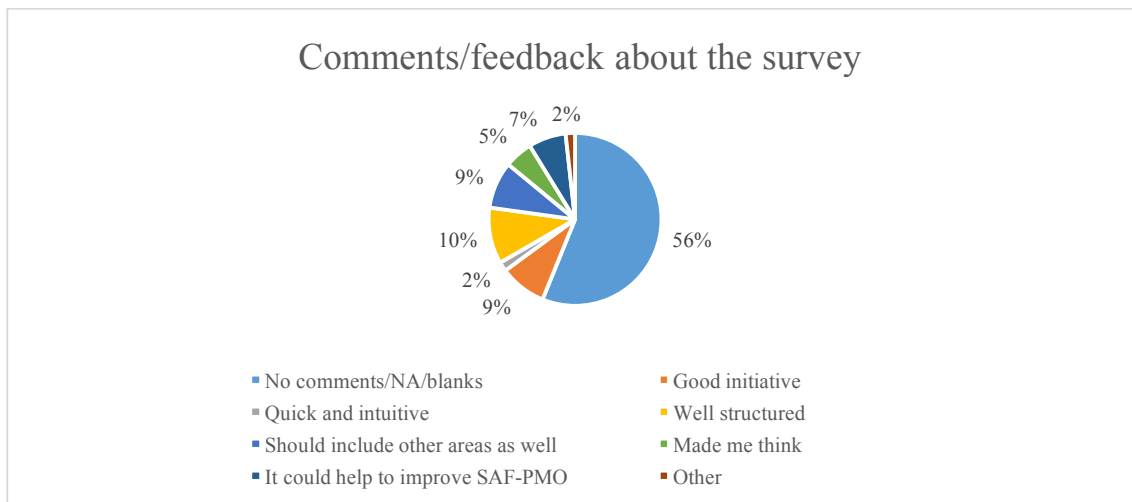
Figure 31– Comments/feedback about the survey [self–constructed]

4.7 Discussion

In this survey, 75% of the people who received the survey by email have responded to it (section **4.1.1**), which means that three quarters of the target initially identified have participated in this survey.

In terms of profile, we can observe that most respondents are internal employees (82%) and 68% have for 5 or more years of experience. We can also conclude that project managers and people for the continuous improvement team members are not as experienced as people in the other areas (section **4.1.1**; section **4.1.2**).

In terms of project management tasks (section **4.2.1**), these appear in line with Project management Institute (2013), once most answers consisted in "Ensure that the project meets its goals (39%) and "Manage scope, budget, resources, risk, plan and project's

quality" (55%). Therefore, most respondents have shown that they have solid knowledge on what a project manager does.

Regarding tasks performed by business analysts (section **4.2.2**), these are not as clear as the ones for project managers. Although the most chosen answers are in line with International Institute of Business Analysis (2015a) – "Design and recommend solutions according to stakeholder's needs" and "Elicit requirements" – project managers, business analysts, business areas and IT team also selected "Ensure that the project meets its goals" (12%). However, this answer cannot be considered as wrong.

According to the literature, we can say that both business analysts and project managers have goals, but they are different. Carkenord (2005) defends that the goal of the project manager is to make sure that the product is delivered within the agreed time frame and budget. On the other hand, Carkenord (2005) states that the business analyst's goal is to make sure that the product meets the requirements. Finally, while the project manager's focus is on the project, business analyst's focus is on solution (Pullan, 2015). Still, when looking at the definitions provided by the institutes of reference, we can see that the project manager is responsible for the project objectives (Project Management Institute, 2013; International Institute of Business Analysis, 2015a) while the business analyst defines requirements and recommends solutions in accordance to the requirements (Project Management Institute, 2013; International Institute of Business Analysis, 2015a), "*that can deliver value*" (International Institute of Business Analysis, 2015a). So, the business analyst's job is to make sure that the solution was designed according to the stakeholder's needs as well as to ensure that the recommended solution delivers value to the organization.

As for other options, 5% referred "Test the software" and 2% "Manage scope, budget, resources, risk, plan and project's quality". According to the Bodies of Knowledge, these are not part of business analysis tasks. International Institute of Business Analysis (2015a) introduces us the "*Tester*", the stakeholder responsible to conduct "*the verification process*". For the second option Project Management Institute (2013) refers "*Managing a project includes, but it is not limited to (…) Balancing the competing project constraints, which include, but are not limited to: Scope, Quality, Schedule, Budget, Resources, and Risks*", which denotes that this tasks is attributed to project managers.

However, the 5% of the answers that indicate that test the software is a BA tasks may be due to the fact that business analysts at Cofidis used to perform Tester activities when there was no team with that mission.

Concerning the average score that represents degree of definition of PM and BA tasks (section **4.2.3**), it stands for 3,4 – on a scale from 1 to 5. Project Managers, Testers and continuous improvement team placed their answers between neutral and defined. As for the business analysts, besides selecting these answers, they have also selected "Not defined". As for business areas and IT team, they have selected all the points in the scale. These findings show us that Business Analysts, IT and Business areas don't have a homogeneous opinion on this matter.

 The results on the perceptions on the degree of definition of PM and BA tasks (section **4.2.3**) consisted in "There are overlaps" (23%), followed by "The roles are defined" (14%). In these results, most Business Analysts, IT technicians and Business areas workers indicated that there are overlaps. These answers confirm that the views we have explored in the literature review (Carkenord, 2005; Carkenord *et al.*, 2010; Chan, 2011; Maritato, 2012; James, 2015; Pullan, 2015; Project Management Institute, 2016).

Still in the question on the perceptions of the degree of definition of PM and BA tasks (section **4.2.3**), most project managers and continuous improvement analysts referred that "The roles are defined". As for testers, most selected "Not Applicable". Finally, in term of roles definition we can see that there is a gap of perceptions because only one business analyst wrote that "The roles are defined", while most project managers said that "The roles are defined". However, it is also important to refer that two business analysts considered the roles as defined, but indicated that there is room for improvement.

When it comes to perceptions of value (section **4.3**), the value of a business analyst perceived in a greater scale than the value of a project manager. In fact, the sentence that mentioned the value of the business analyst was selected 47 times, while the sentence that mentioned value of project manager was selected 37 times. Although the literature indicates that business analysts may find obstacles in professional recognition (Paul *et al.*,

2014; James, 2015), these results show us that this is not the case at Cofidis Portugal because the value of the business analyst is recognized by the project team.

While all the project managers considered business analysis as important, only 8 business analysts considered project management as relevant. Again, we can observe a gap of perceptions between business analysts and project managers. Also, 3% of the answers state that business analysis and project management are not related, including one business analyst and two IT professionals.

Still, 34% of the answers indicated that project management and business analysis are complementary areas, which confirms the literature (Carkenord, 2005.; Carkenord *et al.*, 2010; Maritato, 2012; Pullan, 2015; Project Management Institute, 2015). Lastly, two Business Analysts and two people from the business areas referred that they didn't understand the difference between project manager and business analyst. As for the last result, it shows that two business analysts are not sure about their tasks. It also shows that two business areas members who work with both project managers and business analysts aren't aware of the difference between them.

In terms of the impacts of the absence of a business analyst (section **4.3.4**), most people referred that it can cause poor requirement definition, poor solution design and lack of documentation (44%), followed by lack of project's efficiency and quality (19%) and "Inexistence of an intermediary between business areas and technical areas" (12%). In fact, these results are aligned with International Institute of Business Analysis (2015a) that refer some activities that business analysts can undertake, such as *"analyzing needs and solutions", "driving change and facilitating stakeholder collaboration"*. Again, we can confirm that the project team at Cofidis Portugal is aware of the value of a Business Analyst for the organization.

However, we can observe that there the IT team has strong opinions on the absence of a business analyst, stating that it would have "low impact" (4%), "high income only if the business analyst has the right skills" (2%) and that "it could reduce the gap between business areas and the deliverables (2%). These results denote some tension between the IT team and business analysts at Cofidis Portugal.

As for the absence of a project manager (section **4.3.3**), most people referred that there would be a lack of planning, monitoring and resource allocation management (33%), along with the inability to meet the project's deadlines (23%). These answers are aligned with the project manager tasks referred in Project Management Institute (2013) and show that the project team is aware of the value project management brings to the company.

However, 5% of the answers indicate "low impact", being the authors of this answers both IT technicians and business analysts. In addition, one IT team member referred that not having a project manager would have a "positive impact". One more time, we notice a tension coming from the IT team.

When comparing answers on the absence of a BA and the absence of a PM, we can observe that "Not applicable" answers accounted of 9% for BAs, while were 11% for PMs. In the BA question, 2% (business area member) stated that they don't know the impacts of its absence, while 5% (Business analyst, IT team member and Business area member) stated that they don't know the impact of the absence of a project manager. Whereas 5% of the respondents said that another project team member could perform BA tasks during their absence, 9% of the respondents said that another project team member could perform PM tasks if there wasn't any project manager around. Finally, we can observe that business analysts are slightly more recognized by their peers than project managers.

One a scale from 1 to 5, the average score given to the BA-PM/PM-BA relationship (section **4.4.1**) was 3,3 (neutral). We can also observe that 32% of the respondents found it aligned. However, only one business analyst and two project managers found the PM-BA/BA-PM relationship aligned. This means that the perception of the alignment of business analysts and project managers is different from the perceptions that the other team members have on their relationship.

In terms of the impact of the relationship on the deliverables (section **4.4.2**), most people (39%) believe that PM-BA relationship affects the deliverables. Thus, PM-BA/BA-PM relationship is regarded as important for the company.

We can state that most people agree on the fact that there is room for improvement both for project management and business analysis. This is explained with the fact that questions that called for improvement suggestions had 11% of "Not Applicable" answers for project management and 5% of Not Applicable" answers for business analysis (section **4.5**).

The most mentioned opportunities on the improvement of the project management sector were: alignment with the project team, collaboration with the business analyst, improve project communication, and improve planning. We can link these improvement measures with the Project Manager skills mentioned in Project management Institute (2013), such as *"team building"*, *"influencing"*, *"trust building"* and *"conflict management"*.

Regarding opportunities to improve the Business analysis sector, most answers were not repeated, being classified as "others". Apart from that, the top tips were collaboration and alignment with the project team, improve business knowledge, improve communication and sharing knowledge.   In International Institute of Business Analysis (2015), we can find skills related with these improvement measures, such as *"Business Knowledge"*, *"Communication skills"* and *"Interaction skills"*.

The improvement measures mentioned show that there is a need for project managers and business analysts to work together, not only as a *"dynamic duo"* (Carkenord, 2005; Maritato, 2012) with each other, but also as a dynamic team, including the project team. Also, business knowledge seems to be key to thrive at Cofidis Portugal. Finally: this research resulted in three tips to improve Project Management and Business Analysis at Cofidis Portugal: fostering the notion of PM-BA/BA-PM partnership, implementing the notion of dynamic team and improve business knowledge. Literature will be used to support each one of these tips.

In terms of fostering the notion of PM-BA/BA-PM partnership, goals of both project manager and business analyst should be fully aligned (Wysocki, 2011), making sure that the business analyst and the project manager are involved in the project from the beginning to the end (Chan, 2011; Wysocki, 2011; Pullan, 2015). Still, if there are doubts about the roles of each one, a RACI Matrix (Pullan, 2015) outlining the roles and responsibilities of each stakeholder should be used and shared with the project team. As

a result, roles and responsibilities will be clear for everyone. With this system, the business analyst can be focused on the scope goals, while the project management could be focused on the project goals (Pullan, 2015). At the end, the ends can meet because these two professionals are able to establish a PM-BA/BA-PM partnership.

Also, both project management and business analysis can contribute to foster a dynamic team, by contributing to a good project infrastructure (Chan 2011). Project infrastructure does more than fostering a good PM-BA relationship, instead, it allows both project managers and business analysts to contribute for good communication within the project team. Important measures related to project infrastructure were already mentioned in the survey, such as centralizing the documentation in one place and update documentation after decisions. These measures result in improving organization in both project management and business analysis. As also mentioned in the survey, adapting flexible approach may be needed (Chan, 2011; Pullan, 2015). In those cases, it is necessary to inform the project team in order to develop "*a common understanding*" (Pullan, 2015), which allows for a better degree of stakeholder engagement.

Finally, according to the survey, business knowledge is considered as crucial by project team members at Cofidis Portugal. According to International Institute of Business Analysis (2015a), for performing business analysis, it is essential to have business knowledge, once enables the business analyst to understand the needs and the value a solution may have to an organization. Business knowledge brings objectivity and rigorousness in requirements elicitation and solution evaluation phases, which were two must-have skills for business analysis also referred in the survey.

As for Project Management Institute, it is expected that the new Guide tackles business knowledge (Project Management Institute, 2017a). Still, according to Heerkens (2009), business knowledge in project management allows for more respect of the profession and strong connections with the organization.

Chapter V – Conclusions and further research

5.1 Conclusions

This research tackled a specific reality – Cofidis Portugal. The aim of this research is to understand three aspects: whether the roles of both project manager and business analyst are clear for the project team; how these roles are perceived at Cofidis Portugal; and which are the improvement measures could be implemented in the name of project success.

With this approach, we can conclude on the perception the company has of these two roles and the steps we can take to improve project management and business analysis at Cofidis Portugal. In order to draw conclusions of this research, research questions will be answered below:

RQ1: Are the roles and responsibilities of both project managers and business analysts clear?

Through the findings (section **4.2**), we can conclude that the respondents of this survey are well aware of the tasks and responsibilities of both a project manager and a business analyst, once most answers are aligned with the roles and tasks described in Project Management Institute (2013; 2015) and International Institute of Business Analysis (2015a).

The average value of the perceived degree of definition of BA and PM tasks was neutral (3,4). However, the options selected by different project team members denote that there is no consensus about this question (section **4.2.3**). When asked to justify the degree of definition of BA and PM task, the respondents mentioned that there are overlaps (23%) and defended that the roles are defined (14%). Through these findings, we can observe that business analysts tend to notice more overlaps than project managers (section **4.2.3**).

Most of the people surveyed state that business analysis and project management are complementary areas. Only three people stated that these areas are not related. These two people were one business analyst and two IT professionals (section **4.3.1**).

Still, a minority of business analysts and business areas members referred that they didn't understand the difference between project managers and business analysts (section **4.3.1**)

When it comes to the value of each role, the value of a business analyst is more recognized by the project team than the value of a project manager. Also, project managers are more likely to recognize the importance of business analysis than the opposite (section **4.3**). In fact, just as Pullan (2015) has mentioned, business analysts are more likely to detect tension in BA-PM/PM-BA relationship than project managers.

 Finally, we can say that the roles of both project manager and business analyst are clear, but that there is room for improvement.

RQ2: How is the relationship between these two roles perceived by each stakeholder?
While most business analysts, project managers and IT team members perceive the PM-BA/BA-PM relationship as neutral, most testers and business areas members considered this relationship as aligned (section **4.4.1**).

On average, this relationship is classified as neutral. However, only one business analyst and two project managers classified this relationship as aligned (section **4.4**). In terms of how this relationship affects the deliverables, most respondents believe that it does, meaning that this relationship is important for the project team (section **4.4.2**).

To answer this question, the relationship between these two roles is perceived as neutral, in terms of alignment. In terms of importance, it is substantial because it affects the deliverables quality.

RQ3: Which are improvement opportunities regarding the process or the role?
Most of the respondents suggested that there is room for improvement for both Project Management sector and Business Analysis sector (section **4.5**). Finally, after linking the literature with the findings (section **4.7**), we can conclude that these three measures can foster the effectiveness of both Project Management and Business analysis sector:

1. **Fostering the PM-BA/BA-PM partnership:** This partnership should work from the very beginning to the end of a project (Chan, 2011; Wysocki, 2011), meaning that both project manager and business analyst should be involved and completely aligned (Wysocki, 2011). In this partnership, both professionals should be aware of their different roles and responsibilities, that can be translated into a RACI Matrix and shared with a project team.

2. **Implementing a dynamic team:** project management and business analysis can foster a dynamic team with the project team members by establishing a reliable project infrastructure and promoting open communication, which will increase stakeholder engagement.

3. **Improve business knowledge:** Having a good command of the business knowledge in which a professional operates is a key to success. It is not only a crucial competence identified in the survey, but it is also a skill that is good for both project managers and business analysts. As a project manager, business knowledge can help to strengthen the connections with the business (Heerkens, 2009). As a business analyst, it is essential to have business knowledge to be able to collect requirements and recommend solutions (International Institute of Business Analysis, 2015a), with objectivity and rigor.

5.2 Limitations

1. **This study did not measure different perceptions of project success**
   People from different areas at Cofidis Portugal can have different ideas on the way to measure project success. This was not tackled in this research.

2. **This study only tacked one specific reality**
   Unlike Pullan (2015), who conducted a survey in an international level (having 186 participants from 24 countries), this survey was shared in one specific company – Cofidis Portugal – therefore, these findings cannot be generalized.

3. **Detailed questions were not made due to broad target**

    Once this survey targeted all project stakeholders, specific questions on the role of project manager and business analyst were not made to avoid confusion and "Not Applicable" answers from other project team members.

5.3 Further study

In the comment section, 9% of the respondents referred that the relationship with other areas should also be explored.

In fact, a project team does not only have business analysts and project managers. Thus, it will be interesting to explore the relationship with other project team members, eg IT technicians, once there is a sign of tension from IT technicians towards project managers and business analysts (section **4.3**).

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Appendix I – Comparison between PMI and IIBA

	PMBOK ◆ 5th edition (PMI)	Business Analysis for Practitioners: A Practice Guide (PMI)	BABOK ◆ v3 (IIBA)	Requirements Management: A practice guide (PMI)
Published	2013	2015	2015	2016
Purpose	"The PMBOK® Guide identifies that subset of the project management body of knowledge that is generally recognized as good practice." (p.2)	"Describes the work of business analysis and identifies the tasks that are performed in addition to the essential knowledge and skills needed to effectively perform business analysis in programs and projects." (p.1)	"The primary purpose of the BABOK® Guide is to define the profession of business analysis and provide a set of commonly accepted practices. It helps practitioners discuss and define the skills necessary to effectively perform business analysis work. The BABOK® Guide also helps people who work with and employ business	"This practice guide describes the work of requirements management as historically defined by PMI. It defines the tasks that are performed as well as the essential knowledge needed to perform requirement management effectively on programs and projects" (p.1)
Project (Definition)	"A project is a temporary endeavor undertaken to create a unique product, service, or result" (p.3)	In line with PMBOK	In line with PMBOK (p. 449)	In line with PMBOK (p.5)
Project Manager (Definition)	"The project manager is the person assigned by the performing organization to lead the team that is responsible for achieving the project objectives." (P.16)	In line with PMBOK	"Project managers are responsible for managing the work required to deliver a solution that meets a business need, and for ensuring that the project's objectives are met while balancing the project factors including scope, budget, schedule, resources, quality, and risk." (p.18)	In line with PMBOK (p.71)
Project Management (Definition)	"Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements" (p.5)	In line with PMBOK	Not mentioned	In line with PMBOK (p.5)
Business Analysis (Definition)	Not mentioned	"The set of activities performed to identify business needs and recommend relevant solutions; and to elicit document and manage requirements" (p.3)	"Business analysis is the practice of enabling change in an enterprise by defining needs and recommending solutions that deliver value to stakeholders. Business analysis enables an enterprise to articulate needs and the rationale for change, and to design and describe solutions that can deliver value." (p.2)	In line with Business Analyst: A Practice Guide (p.65)
Business analyst (Definition)	"Typically, the business need and the cost-benefit analysis are contained in the business case to justify and establish boundaries for the project, and such analysis is usually completed by a business analyst using various stakeholder inputs." (p.69)	"Business analysis may be performed by any individual who is responsible for performing the work regardless of the person's title. In this practice guide, the person(s) who performs business analysis tasks in the context of programs and projects will be referred as business analyst. The term is being used in the broad sense and represents all the roles that are responsible for performimg business analysis tasks within their organization and specifically the business analysis tasks on programs and projects." (p.4)	"A business analyst is any person who performs business analysis tasks described in the BABOK® Guide, no matter their job title or organizational role. Business analysts are responsible for discovering, synthesizing, and analyzing information from a variety of sources within an enterprise, including tools, processes, documentation, and stakeholders. The business analyst is responsible for eliciting the actual needs of stakeholders—which frequently involves investigating and clarifying their expressed desires—in order to determine underlying issues and causes." (p.2-3)	Not mentioned
Interactions between PM, BA and other roles	"The project manager also works closely and in collaboration with other roles, such as a business analyst, quality assurance manager, and subject matter experts." (p.17)	"Confusion exists between project managers and business analysts (...) this practice guide is intended to clarify these roles through the use of collaboration points"	‹Stated in each knowledge area›	"In Business Analysis for Practitioners: A Practice Guide, PMI reseach indicates that 67% of high performing organizations value the collaboration between project managers and business analysts or whatever the role is responsible for role - related activities" (Preface - ix)
Requirements (Definition)	"A condition or capability that is required to be present in a product, service, or result to satisfy a contract or other formally imposed specification"(p. 558)	In line with PMBOK (p.7)	"A requirement is a usable representation of a need. Requirements focus on understanding what kind of value could be delivered if a requirement is fulfilled. The nature of the representation may be a document (or set of documents), but can vary widely depending on the circumstances" (P.15)	In line with PMBOK (p.5)
Requirement types	"Business requirements, Stakeholder requirements, Solution (functional and nonfunctional requirements) Transition requirements, quality requirements project requirements, program requirements" (p.112)	"Business requirements, Stakeholder requirements, Solution requirements, functional and nonfunctional requirements or quality service, Transition requirements, quality requirements project requirements, program requirements" (p.7)	Business requirements, stakeholder requirements, solution requirements (functional requirents and no funcional requirements - or quality of service requirements), transition requirements (p.16)	Business requirements, Stakeholder requirements, Solution (functional and nonfunctional requirements) Transition requirements, quality requirements project requirements, program requirements (p.39)

69

Appendix II – Comparison between PMI and IIBA guides

PMBOK 5 edition (Project Management Institute, 2013)	BABOK V3 (International Institute of Business Analysis 2015a)	Business Analysis for Practitioners: A Practice Guide (Project Management Institute, 2015)	Requirements Management: A Practice Guide (Project Management Institute, 2016)
This Guide is Divided into: ten knowledge areas: - Project Integration Management - Project Scope Management - Project Time Management - Project Cost Management - Project Quality Management - Project Human Resource Management - Project Communications Management - Project Risk Management - Project Procurement Management - Project Stakeholder Management And five Process Groups: - Initiating - Planning - Executing - Monitoring and Controlling - Closing	This Guide describes six knowledge areas: - Business Analysis Planning and Monitoring - Elicitation and Collaboration - Requirements Life Cycle Management - Strategy Analysis - Requirements analysis and design definition - Solution evaluation Besides these knowledge areas, BABOK provides a set of Techniques and Perspectives	This Guide describes six domains/sections: - Needs Assessment - Planning - Analysis - Traceability and Monitoring - Evaluation	This guide describes seven "set of activities", divided in sections: - Needs assessment - Requirements management planning - Requirements elicitation - Requirements analysis - Requirements monitoring and controlling - Solution evaluation - Project or phase closure

Appendix III – Online Survey

Online survey

As mentioned before, this survey was originally written in Portuguese. The original version can be found here: https://marianadavm.typeform.com/to/PhS0An

Introduction

Dear colleagues,

This survey is aimed at the employees who have participated in a Cofidis project in the last 6 months.

This survey's goal is to explore the relationship between the project manager and the business analyst.

It is anonymous and it takes only 10 minutes to complete.

If you have any doubt or feedback, don't hesitate to contact me.

Thank you for your time.

Mariana Machado

Survey

1. **Are you an internal employee or an outsourcing employee?**
   A. Internal (Cofidis)
   B. Outsourcing

2. **In a Cofidis project, in which area do you work?**
   A. Project Management (PMO)
   B. Business Analysis (SAF)
   C. Tests and Quality
   D. Continuous improvement
   E. Technical area (DSI)
   F. Business area

3. **How many years of experience do you have in your current role?**
   A. Less than 2 years
   B. Between 2 and 4 years
   C. More than 5 years

4. **In your current reality, which of the following tasks does a project management perform?**

    A. Manage scope, budget, resources, risk, schedule and project's quality

    B. Elicit requirements

    C. Test the software

    D. Build the software

    E. Design and recommend solutions according the stakeholder's needs

    F. Assure that the project meets its goals

    G. I don't know

5. **In your current reality, which of the following tasks does a business analyst perform?**

    A. Manage scope, budget, resources, risk, schedule and project's quality

    B. Elicit requirements

    C. Test the software

    D. Build the software

    E. Design and recommend solutions according the stakeholder's needs

    F. Assure that the project meets its goals

    G. I don't know

6. **How do you evaluate the tasks of both business analyst and project manager?**

1	2	3	4	5
Not defined at all	Not defined	Neutral	Defined	Very well defined

7. **Justify your answer to the previous question** (open question)

8. **Select the options you consider as correct according to your current reality**

    A. Project management and business analysis are complementary areas

    B. Project management and business analysis are not related

    C. Project manager is an important role to create value in the company

    D. Business Analysis is an important role to create value in the company

    E. In a hierarchy, project managers are superior to business analysts

    F. In a hierarchy, business analysts are superior to project managers

9. **How do you classify the relationship between the project manager and the business analyst?**

1	2	3	4	5
Very unaligned	Unaligned	Neutral	Aligned	Very aligned

10. **In your opinion, the relationship between the project manager and the business analyst affects the deliverable's quality?**

1	2	3	4	5
It doesn't affect	It affects a little	Neutral	It affects	It affects a lot

11. **In your opinion, what would be the impact if there wasn't any business analyst in a project? (open question)**

12. **In your opinion, what would be the impact if there wasn't any business analyst in a project? (open question)**

13. **In your opinion, which are the three main points to be considered to improve SAF? (open question)**

14. **In your opinion, which are the three main points to be considered to improve PMO? (open question)**

15. **Leave here your comments/feedback about this survey (non-required question/open question)**