"COULD E-GOVERNANCE BECOME AN IMPLEMENTATION PLATFORM FOR PUBLIC-PRIVATE PARTNERSHIPS?"

An exploratory study of PPP in Denmark.

MASTER'S THESIS



MSC IN SOCIAL SCIENCE - ORGANIZATIONAL INNOVATION AND ENTREPRENEURSHIP

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ABSTRACT

Public Private Partnerships (PPP) are a relatively recent phenomenon in the international development cooperation between governments and businesses. These joint ventures are undertaken in an attempt to bring the benefits of private sector's efficiency in the national agenda.

Although many governments have considered various strategies for the partnerships' inclusion, Denmark has proved to be an exception. With a short history and a relatively scarce knowledge, PPPs in Denmark did not gain much popularity. In the same time, the country has registered considerable progress in digital governmental services. The Danish government has always been keen to become in the top e-government service providers, therefore, it is using highly developed policies in order to achieve that.

The current study has appeared as a result of the discrepancy in the available researches about the PPP sector in Denmark, mainly due to the lack of a centralized development platform. Therefore, as a potential solution, the paper is testing the possibility of using E-Governance services.

A qualitative study consisting of semi-structured interviews has been carried out with 6 key specialists in the PPP domain. The data was then coded and analyzed in relation to the existing literature, and as a result, a new model was created. The model includes a set of requirements that a potential PPP platform should fulfill. Finally, the research question was tested against the new model and it resulted in a positive result.

The paper points on the limitations of the PPPs in Denmark and their biggest barriers and it comes with a model for analyzing a potential PPP platform. The study serves as an introductory premise for future research.

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1. Introduction

"Coming together is a beginning; keeping together is progress; working together is success." (Henry Ford)

1.1. Background

The growth of the world population and the development of the financial markets (Subrahmanyam & Titman, 1999) has led to a high demand for infrastructure improvements and an increased requirement for access to education and employment, as well as, income-generating opportunities. Developing countries have been especially affected by the consequences of their economic progress (OECD, 2016).

In the international debate on the effectiveness of aid taking place within different countries, the private sector was until recently hardly invited as a stakeholder to join the discussions. The attention for multi-stakeholder partnerships for pursuing development objectives received a major stimulus only in the last decades (Ministry of Foreign Affairs of the Netherlands , 2013). Public private partnerships have been defined as "a formally agreed cooperative venture between public and private actors aiming at the provision of public goods." (Bexell & Mörth, 2010). Nowadays, they are increasingly considered to be an attractive development instrument and are often used by the governments around the world to drive solutions with a limited public budget.

In a Report from 2003 on the "Guidelines for Successful Public-Private Partnerships" The European Commission introduced 4 main advantages that PPPs have proven to bring:

- 1. Additional capital
- 2. Alternative management and implementation skills
- 3. Value added to the individual consumer and to the public as a whole
- 4. Better identification of needs and an optimal use of resources. (European Commission, 2003)

However, not all countries are open to alternative forms of market cooperation, one of these countries being Denmark. With only 13 existing PPP projects and an overly complex legislation system, public private partnerships have not gained much popularity (Tvarnø & Østergaard, 2013). Moreover, they have proved to be fairly sophisticated and challenging to be designed, implemented and managed. Therefore, in order to bring a certain level of benefit, the involved parties must possess a high degree of expertise and to be greatly involved during the whole process.

The economic growth and development (World Bank, 2016), and the technological expansion (Chen, 1996) have also forced governments to search for new styles of governance, with a high level of citizens' engagement. The main purpose being to improve society's views and increase its trust

towards the government. According to Bekkers and Korteland (2005), these new styles of governance represent a change for traditional bureaucratic systems to pluricentric systems. In order to improve control and transparency and to link people, organizations, groups, information and knowledge, the new models of governance have embraced the ICT tools and used it extensively (Pina, Torres, & Acerete, 2007). Therefore, they have been called "E-Governance services" and have been defined as the application of information technology to the process of Government, functioning to bring out responsible, responsive, efficient and transparent governance (Rajashekar, 2002). After almost 20 years of functioning, E-Governance has increased accountability, openness and transparency initiatives (Pina, Torres, & Acerete, 2007).

The world's population is increasing (The World Bank, 2016) and together with the recent growth of the austerity policies, due to the global financial crisis, (Macilwain, 2010) there is a critical need for a set of mechanisms in charge of the development of successful projects with limited budgets. This need has signaled a requirement for radical changes. As Ed Johnson, a project finance partner at the law firm Squire Paton Boggs, said: "Diversification of goods and services, and the delivery of those to a higher standard, is becoming more politically important to governments" (Fahy, 2016).

Denmark is no exception. Despite enjoying a high standard of life, the economy of the country recovered relatively poorly after the economic crisis from 2008. Therefore, it is currently struggling to achieve its economic development plans with a budget deficit (Forbes , 2015). In these conditions, a curious dilemma appeared. Both, e-governance and public-private partnerships, aim to benefit the civil society, in the first place, therefore, having a strong network of electronic governmental services and a relatively new tool, such as PPP, would it be possible to use one for the benefit of the other? In the following paper we are going to analyze the profile of the country in relation to both topics and seek to answer the question.

1.2. Problem Statement and Purpose of the Study

Denmark benefits from a wide range of services and sources to bring convenience, transparency and safety into the lives of its citizens. The government's activities and the country's legislation have always focused on strategies for improving the society's satisfaction and gaining its trust. Therefore, the idea for this study was born after analyzing the different types of market cooperation existing currently, and realizing that public private partnerships are rather undeveloped

compared to their use in the neighbor countries. Moreover, there is very limited knowledge about their potential due to the lack of a specialized organization with the right set of skills in charge.

Considering the country's high level of technological progress, especially in the digital governmental services, the question about a potential collaboration between e-governance and public private partnerships emerged. The preliminary research on the PPP subject pointed on the gap in their expansion, due to the absence of a platform that would possess the required frameworks and would increase the cooperation and the share of knowledge.

The purpose of this study is, firstly, to recognize the importance of a common stage for Public-Private Partnerships in a society which is not fully familiar with the concept, and secondly, question the possibility of using the E-Governance as a facilitating factor for developing PPPs in Denmark.

1.3. Research Question

"Could E-Governance become an implementation platform for Public-Private Partnerships?"



The purpose of this thesis is to contribute to a greater understanding of the E-Governance process in the context of the PPP projects in Denmark, bring an insight of its broad use for the benefit of the society and create new knowledge in the field of technological innovation in relation to a public matter. More specifically, we are going to conduct an empirical research consisting of semi-structured interviews with key people in the field and inquire whether it is possible to develop a community-wide platform for Public-Private Partnerships that would be helpful for their expansion. In this chapter we will discuss the different methods of research philosophies and of data collection, and we will argue upon which one suits the best our scenario. We will also present the respondents used in the interview and the questions asked. Moreover, we are going to discuss about the reliability and validity of the data.

2.1. Research Philosophy and Approach

Firstly, it is important to reflect and discuss upon the research philosophy, a key aspect for any paper, as it determines the search process for knowledge and how that knowledge is further processed and analyzed.

The term research philosophy refers to a system of beliefs and assumptions about the development of knowledge (Saunders, Mark, & Thornhill, 2015). Weather we are conscious of them or not, at any point in the analysis there will be made certain assumptions that will eventually show the author's understanding upon the research question and will influence the type of methodological approach and the interpretation of the results. (Crotty, 1998) Even though, the philosophy adopted will be influenced by several general considerations, the final outcome will result as a consequence of the relationship between knowledge and its interpretation.

Saunders (2015) argues that all research philosophies can be categorized in three types of assumptions: Ontology, Epistemology and Axiology. **Ontology – nature of reality**, discusses about the way the world operates in relation to the social actors. There are two aspects of the ontology: *objectivism* and *subjectivism*. Objectivism portrays that concepts, such as social entities, exist as a meaningful reality external to the concerns of social actors about their existence (Crotty, 1998). This approach is not suitable nor desirable for the paper, since our research discusses the possibility of creating a common platform, where both the organizations and the actors should coexist and generate new forms of resources.

That being said, we will focus on the second aspect – *subjectivism*, which asserts that social phenomena are created with the perception and as a consequence of the social actors'. Furthermore, the approach affirms that, as the social interactions between actors are in a continual process, the social phenomena are in a constant state of revision. (Saunders, Mark, & Thornhill, 2015) This meaning that in order to understand the reality, actors must study the up-to-date details of the situation. Considering that our study is more interested in understanding the progress, as well as, the gaps in the Public-Private Partnership sector, it is critical to adopt a subjective approach upon the matter and regard the problem as a continually- changing process. Thus, we are going to regard the nature of reality as dynamic and modifying.

Furthermore, Saunders (2015) discusses how subjectivism is often associated with constructivism, or social constructivism. A theory that views reality as being socially constructed and the actors as perceiving different situations in varying ways, as a consequence of their own views of the world. Thus, the actors' different interpretations are likely to affect their actions and the nature of their social interactions. The following research is addressing a social constructivist attitude, this meaning that the data gathered will be interpreted based on the personal experience of the author.

Epistemology - assumptions about knowledge, points on what constitutes acceptable, valid and legitimate knowledge and how human beings communicate knowledge between each other. There are 3 main postulates that epistemology is embracing: positivism, realism and *interpretivism*. While the positivism and the realism philosophies assume that the human mind is independent from the objects in the surrounding, interpretivism argues that it is necessary for the researcher to understand the differences between humans in their roles of social actors. Furthermore, it points about the importance of conducting a research among people rather than about objects, since people interpret their social roles in accordance to the meanings they give to these roles (Saunders, Mark, & Thornhill, 2015). Considering the high importance of the civil society in the current research process, and having it as the main arbiter and beneficiary, we are going to adopt an interpretivist approach.

Axiology – the role of values and ethics, deals with values of the researcher and of the research participants. The role of the personal values of the author plays a great importance at all stages and influences the credibility of the results (Saunders, Mark, & Thornhill, 2015).

Heron argues that personal values are the guiding reason of all human actions. He also states that researchers expose axiological skills by articulating their values as a basis to making judgements in a research. At all stages the researcher will demonstrate his values. (Heron, 1996)

The current research is addressing a socially inclined question with a considerable affiliation to the civil society, therefore the analysis will be conducted based on a set of semi-structured interviews. This model was chosen based on the potential perspectives it can give together with a better understanding of the existing issues. In line with the interviews, the literature review was carefully selected in order to give an in-depth knowledge on the processes involved in the research question.

2.2. Research Design

As previously stated in the philosophical approach, we have chosen to look at the research question through the eyes of the people working closely with the PPP projects. There is no better way of finding out their points of view than having a conversation with them. A conversation gives the possibility of learning the respondents' experiences, feelings and issues on the matter. The interview is a conversation that has a structure and a purpose determined by the interviewer. It is professional interaction that brings the possibility of obtaining thoroughly tested knowledge (Kvale, 2007).

This paper has established its analysis based on semi-structured interviews. Sanders (2015) describes research interviews as a purposeful conversation between two or more people, requiring the interviewer to establish a rapport, to ask concise and unambiguous questions, to which the interviewee is willing to answer, and to listen carefully. The main purpose in an interview is to ask relevant questions to the research study.

While there are several types of research interviews, such as, structured, semi-structured, unstructured and in-depth, we are going to focus on *semi-structured interviews*, also referred as qualitative research interviews (King, Using Interviews in Qualitative research , 2004). In semi-structured interviews the researcher will have a list of possible themes and key questions that need to be asked, however, he might omit or choose to skip some of them, given the circumstances. In the same time, additional questions might be asked, in order to explore the objectives of the research (Saunders, Mark, & Thornhill, 2015).

This type of interviews was chosen to provide a dynamic method of collecting data in which respondents have time to express their own understandings on the topic, as well, have the flexibility to develop and clarify their answers, if needed. This approach allows interviewees to speak freely around the subject and gives the research an open access to the information, that might be overlooked otherwise.

All interviews were conducted in English due to the limited knowledge of the author in the Danish language. It should be mentioned that 5 out of the 6 interviewees were Danish speaking, having English as a second language, thus, there might have been certain language and cultural barriers. Therefore, the data will be interpreted based on its meaning rather than analyzing word by word.

Below is the list of questions that the interviews were based on:

- 1. Presentation (name, profession, how are you related to PPP platform)
- 2. Do you think the Danish PPP sector is facing any kind of challenges?
- 3. As a professional in the domain, which areas, would you suggest, PPP should cover in the future?
- 4. Do you feel that PPP has enough coverage in the Danish society?
- 5. Do you believe it would help having a centralized, well-structured governmental platform?
- 6. What characteristics should the development platform possess, in your opinion?
- 7. Are you familiar with the concepts of E-Government/ E-Governance?
- 8. How do you feel about the possibility of using E-Governance as a development platform in order to expand the PPP sector?

2.3. Respondents' Selection

A common question concern, when conducting qualitative interviews, is related to the number of the subjects needed in order to gather enough essential data for the research. Kvale (2007) answers to this with: "Interview as many subjects as necessary to find out what you need to know.". Therefore, the interviews were organized in relation to the importance of the respondents rather than on their number.

The interviews were conducted with the two Academic Directors of the PPP Platform at CBS, and 4 more specialists who are either in the Advisory Board of the CBS Platform or who are working

in PPP related organizations. This gave the research a wide range of perspectives and reduced the bias when analyzing the data.

In Table 1 it is possible to find the names, professions and the relation to the PPP area, of the interview subjects.

Name	Email address	Profession, Work place	Relation to PPP
Carsten <u>Greve</u>	cg.dbp@cbs.dk	Professor, Department of Business and Politics, CBS	Academic Director of the CBS PPP Platform
Paul du Gay	pdg.ioa@cbs.dk	Professor, Department of Organization, CBS and Royal Holloway University of London	Academic Director of the CBS PPP Platform
Christian <u>Bason</u>	ddc@ddc.dk	Chief Executive, Danish Design Center	Part of the Advisory Board of CBS PPP Platform and former leader of MindLab a cross-governmental innovation unit.
Robert <u>Hinnerskov</u>	rh@isobro.dk	General Secretary, Danish Fund-Racing Association	Lobbyist on behalf of the organizations in the PPP sector
Mads <mark>Eriksen</mark>	<u>maer@ftf.dk</u>	Advisor, Corporation of Professional in Denmark	Lobbyist in the PPP sector
Niels <u>Ejersbo</u>	niej@kora.dk	Senior researcher, KORA, the National Institute for Local Governmental Research	KORA is part of the PPP platform and has been involved in several PPP project together with the CBS PPP Platform

Table 1: The interviews' respondents

2.4. Reliability and Validity of the Data

Reliability and validity are ways of demonstrating and communicating the rigors of the research process and the trustworthiness of the research findings (Roberts, 2006). Reliability is described by Saunders as the extent to which the data collection techniques, or analysis procedures, will yield consistent findings. The main threats to reliability are: participant's error, participant's bias, observer error and observer bias. (Saunders, Mark, & Thornhill, 2015)

In what concerns the participants, the interviews were carried at the hours they required with a well-defined and in-advance time frame, therefore, they did not rush though the interviews and took reasonable amounts of time to answer each question. The respondents showed enthusiasm on the topic discussed, even so, their answers had a neutral manner and were even critical at times.

As an observer during the interviews, I have tried to structure and ask the questions in the best way to minimize the bias, therefore neutral tone of the voice was used, with a minimum amount of comments or non-verbal behavior. Furthermore, to increase the credibility of the research, the majority of the respondents did not have access to the questions in advance, so there is no additional bias created, with the exception of one respondent, who requested them in order to have a better preparation on one of the subject.

The qualitative content analysis involved the coding and analysis of the interviews' data using a computerized data analysis package - NVivo software, to enhance reliability and reduce the human error.

Even if reliability is a key characteristic to the quality of the research, it is not sufficient. Various forms of validity are necessary to ensure the quality of research. Validity is the extent to which qualitative research measurement procedures give the correct answer to the research question.

While assuming that the interviews are accurate and valid, there might arise distortions in the process of analysis and interpretation. (Roberts, 2006) Since my personal background on the topic, as the author, is limited to the existing knowledge and literature, I tried not to overlook any nuances or ambiguities during the interviews, therefore eliminating bias.



3. Literature Review

The following chapter will introduce the literature review. We will discuss both, E-Governance and Public Private Partnerships, topics in order to create the literature base needed for the analysis of the interviews' data. It will also introduce the notion of GRC and its implications. The chapter will end with a mini case study describing an example of partnership between the government and the private sector.

3.1. Open Innovation and Digitalization in the Public Sector

A fundamental aspect of innovation is "making linkages and associations" (Cohen & Levinthal, 1990) (Nelson & Winter, 1990). A statement that did not lose its value even 3 decades later. The successful innovation performance is increasingly seen to involve the recognition of external sources of potentially valuable knowledge, the transfer of such knowledge (...) and the deployment of it in the context of innovation, perhaps in continued cooperation with external knowledge sources (Foss, Lyngsie, & Zahra, 2013).

In the beginning of the 20th Century, firms generated, developed and commercialized their own ideas under the paradigm of closed innovation. Universities and government were not involved in the commercial application of science and thus firms had their own in-house R&D laboratories for new product development (Chesbrough, 2003). Together with the increasing opportunities of working with external partners, firms have begun to explore the resources of external sources and individuals in other areas, as new ways to find innovative ideas and solutions. This new paradigm, called *open innovation*, has gained much popularity (Gassmann, 2006). The model is based on the fact that external sources of ideas may often be more valuable than the internal ones, or they can complement the internal ideas to create greater value.

The public sector is no exception to this change in the innovation paradigm (Osborne & Brown, 2005). Nambisan described an interesting similarity between private and public sector innovation: incorporating external knowledge sources into the innovation process (Nambisan, 2008). The growing number of citizen networks and new types of online intermediaries bring an advantage to the enhancement of the public value (Sang, Taewon, & Donghyun, 2012). According to Bommert, innovation in the public sector is usually not a physical artifact, but is rather driven to improve service performance and add value in terms of public benefit (Bommert, 2010). In this sense, Cunningham and Kempling highlighted that public sector innovation should focus more on a continuous process

of interaction and negotiation among various stakeholders (Cunningham & Kempling). In the context of a world where Internet "dominates the scene", a lot of the interaction is only possible because of the technological development. Furthermore, it actually provides the public sector with a floor for expansion and improvement. Thus, it is fair to say that a significant part of the innovation in the public sector is linked to the development of ICTs or overall to *digitalization*.

First of all, it is fundamental to make the distinguishment between IT and digitalization. Information technology or IT, according to Attaran (2003), is defined as "capabilities offered to organizations by computers, software applications, and telecommunications to deliver data, information, and knowledge to individuals and processes" (Attaran, 2003) (Sorooshian & Onn, 2013). Therefore, IT represents just the "technical support" for the organizations using computer systems, whilst in our research we aim to analyze the technological development as a source of innovation and development in the society. Thus, our analysis is going to be based on the new trend in ICT – digitalization. Gray & Rumpe in their paper "Models for digitalization" define it as "the integration of multiple technologies into all aspects of daily life that can be digitized." However, they also mention Gartner's business-related definition which says that it is "*the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business.*" (Gray & Rumpe, 2015). The current study is going to relate to the former definition, because it gives a better representation of the process of digitalization in relation to organizations, businesses, government and lastly the civil society.

As described by Gartner Programs, the world now faces the challenge of straddling from the era of IT to the era of "digitalization", which is characterized by deep innovation, exploitation of a broader universe of digital technology and information, and a need for a much faster and more agile capability (Gartner executive programs , 2014). They have also visualized the progress in the form of the diagram below (Figure 1). It illustrates the transition process from a world in which IT was solely an automation step in the support of management and operations, towards a world of innovation described by transformation, efficiency and effectiveness. Gartner also remarks that it is no longer a critical goal or an absolute measure for success, but rather a proven approach that ensures the digital context.



Figure 1: The 3 eras of enterprise IT; Source - Gartner Programs

As previously stated, and confirmed by Garter's interpretation, digitalization is a highly widespread process. It does not only touch all the relationships in a society and their communication systems but, also, creates new forms of mechanisms, such as: smart homes, e-healthcare, or even e-government. Digital government is an evolving concept due to all the changes occurring the digital world, and due to this, it is sometimes bringing particular challenges into vision, which did not exist before. Nevertheless, having a digital government is more than just transforming all the governmental services into digital ones, it actually brings new opportunities. Digital government means having direct communication systems with the authorities, solving problems and coming up with solutions in a fast and efficient way, eliminating corruption and manipulation at the governmental level, and lastly it means new forms of innovation (OECD, 2014).

The concept of digitalization is significant to our research because it creates the "technological bridge" between the two fields we are evaluating: E-Governance and Public-Private Partnerships. It would be quasi impossible to discuss any possibility of collaboration between the two, without involving the process of digitalization. First of all, it is due to their individual reliance on the technological development in the society, and secondly because a co-existence would only occur depending on a digital support.

3.1.1. Digitalization and Public Sector Innovation in Denmark

Our research is an exploratory study on Denmark, hence it is important to analyze the level of digital development and the country's efforts in public sector innovation, before continuing with the literature review.

Denmark possesses a good 50 years of experience with digitalization, which did not start with the advent of PCs and certainly before Internet appeared in the picture. It is remarkable that the digital development in Denmark happened uniformly and simultaneously, especially in the administrative field (Andersen, 2004).

If we take a look at the statistics from the last decade, Danes have proved to be prone to use technological solutions on their daily basis. In fact, Denmark has claimed that it wants 80% of all its communication with the citizens to go through Internet. Furthermore, the Danish government has formulated and published four consecutive "coordinated strategies for digitalization", so far. The strategies were controlled by the central government, regional government and local government in unison. Denmark has also released a common public strategy focused on the welfare system and which aims to accelerate the use of technology and digitalization of the major welfare areas (Digital velfærd) (Greve, 2013). All the governmental services and strategies, combined with a strong ICT development and openness of the civil society, give the country a strong profile in the public sector innovation potential.

Normally, in economically developed countries, public sector contributes to 20%, and in some cases even 30%, of GDP (Eurostat , 2012). Therefore, public sector innovation, which would boost productivity and efficiency, has been a major goal, of political parties, in the last years. Given this significant increasing interest, there have been a raising number of requests for surveys that measure public sector innovation.

In the following paragraph, we will examine the results of the MEPIN study that had the objective of "Measuring public sector innovation in the Nordic countries". This will help us see a clearer picture of where is Denmark's position in terms of public sector innovation and the level of interaction between different organizations in order to create change.

The project was based on a large scale survey in all the 5 Nordic countries: Denmark, Sweden, Norway, Iceland and Finland. The developed questionnaire was similar for all the countries, with small adaptations in specific cases.

In Denmark, the sample size was 604 central and regional governmental institutions, with a response rate of 42 %. The results of the survey showed that between 80% and 90% of the respondents stated that at least one type of innovation was implemented in their institution. Moreover, there has been realized over 70% of both, product and process innovation, within central government, and around 84% of product-process innovation. The survey also shows that in Denmark more than 50% of consultancy services and R&D sourcing are coming from private businesses and the innovation cooperation between central government and the business sector is 58%. This indicating on a fairly high share of partnership alliances with the private sector. The survey presented also the main barriers to innovation, which in Denmark were: lack of funding, internal (time or incentives) and external (rules, lack of suppliers, resistant users), as well as, lack of flexibility in the current legislation (Bugge, 2011).

The MEPIN pilot study has showed that Denmark has a good understanding of the importance of public sector innovation and is investing a great amount of its resources in order to promote it. The government has set innovation objectives that cover the main societal challenges and is efficiently fulfilling them. Moreover, it is establishing collaborations mainly with the private businesses for consultancy and innovation researches. Denmark is also proving to have a high product and process innovation level, as well as a high communication level and organizational innovation in the public sector.

3.2. E-Governance

3.2.1. E-Government and E-Governance: Definitions and Differences

Public administration holds an important role in the process of innovation creation in the society and public organizations. This practice increases productivity and enhances the public value creation. An effective public administration, at the national, regional and local level, is a critical factor in the successful implementation of a national development agenda. A competent governance is central to systematic transformation of economies that trigger sustainable progress. However, for tangible results and positive impact on the lives of the citizens, governments must achieve innovation in their systems, institutions and processes. In this sense, many countries have started a process of modernization in public administration (Anderson, Wu, Cho, & Schroeder, 2015). So, in the last years, governments have faced accelerating economic and social changes, mainly due to innovation through the use of ICTs.

Access to information and citizens' engagement are two main attributes of a well-structured, transparent and developing society. Good governance implies maximum benefit for maximum number of people in the society, however, people's expectations have increased drastically. Therefore, it becomes more and more of a challenge for governments to provide good administration services to their citizens. The development of new information and communication technologies has considerably increased the added value of good governance, and has given birth to a new term: E-Governance (Niranjan & Santap, 2008).

In order to define "E-Governance", most scholars suggest that the first step is to annotate the term "governance" and to make a distinguishability between "E-governance" and "E-government".

Governance has proved to be a problematic term when it comes to a specific definition. In the available literature there is a list of of definitions all differing considerably. Thus, in order to address the research question, the most appropriate definition will be used. Analyzing the existing interpretations, the UNPAN's can be regarded as relevant for this paper. It describes Governance as "the exercise of economic, political and administrative authority to manage a country's affairs at all levels. It comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate theirs differences." (UNPAN, 2011).

The next fundamental step is to draw a difference between E-Government and E-Governance. Similar to the notion of governance, there is considerable confusion between these two terms.

The World Bank defines **E-government** as "the use of information and communication technologies by governments to enhance the range and quality of information and services provided to citizens, businesses, civil society organizations, and other government agencies in an efficient, cost-effective and convenient manner, making government processes more transparent and accountable and strengthening democracy." (World Bank PPP, 2015). While **E-Governance** is defined by UNESCO as "the public sector's use of information and communication technologies with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective." (UNESCO, 2016).

Having distinguished between the two definitions, we can thus conclude that while E-Government addresses issues related to constituencies and stakeholders outside the organization, whether it is regarding the government or the public sector at the city, country, state, national or international level, E-Governance focuses on administration and management within an organization, whether it is public or private. E-Governance involves internally-focused utilization of information and internet technologies to manage organizational resources – capital, human, machines – and administer policies and procedures (Both for the public or the private sector) (Shailendra, Palvia, & Sushil, 2007).

According to Sheridan and Riley, e-governance is a broad concept that encompasses the whole spectrum of the relationships and networks within a government, in relation to the usage and application of ICTs, whereas e-government is limited to the development of online services. As stated in their research, e-government is an institutional approach to jurisdictional political operations while e-governance is a procedural approach to cooperative administrative relations (Sheridan & Riley, 2006).

It is important to be mentioned that in this paper we will be analyzing and focusing on the E-Governance services, since we are trying to build a new development perspective for Public-Private Partnerships, which are going to be defined in the next section. Therefore, even if we will see further observations in the context of E-Government, they would only be introduced because of the existing gap in the data about E-Governance. Consequently, the following part of the chapter will discuss about e-governance practices.

E-Governance goes beyond simple service provisions to build external interactions (Heeks, 2001), enhance democracy, by improving representative participation in political decision making (Lenihan, 2002), strengthen democratic institutions and processes, and involve the public in political choices, so that their needs and priorities are respected (Council of Europe, 2007). In this context, she service provides forms of electronic communication between the government and three main target groups: citizens (G2C), businesses/interest groups (G2B0, governmental organizations/agencies (G2G).

G2C focuses on the activities regarding the citizens, such as: receive questions and answer back, collect taxes, make appointments, provide online forms, information and online trainings. In G2B, the government deals with the private sector and with issues concerning e-procurement or auctioning. The service, however, can also work as B2G when the businesses are selling their products or services to the government. G2G deals with all the activities that take place between different governmental agencies. These activities are usually in charge for the improvement of the efficiency and the effectiveness of the overall governmental system (Shailendra, Palvia, & Sushil, 2007).

Heeks, in his studies, came up with three main contributions of E-Governance: improving government processes (e-administration), connecting citizens (e-citizens) and building external interactions (e-society) (Heeks, 2001). In the long-run, the growth of an online public sphere may require a reassessment of traditional conceptions of the role of the citizen and the nature of government-citizen relation (Lips, 2006). This is argued as well by Biasiott and Nannucci, who state that for E-Governance to be successful, citizens must be prepared to become knowledgeable about current issues and to express opinions or even take initiatives. Moreover, the state has the responsibility to provide comprehensive information as well as channels of communication through which citizens could express their opinions and engage in debates. Regarding this, Coleman also argues that both, citizens the government's representatives, have to be educated about the new types of information technologies, because the decision makers need to receive, understand and take into account citizens' communications (Coleman, 2004).

E-Governance is perhaps the second revolution in the public management, which may transform not only the way in which most public services are delivered, but also the fundamental relationship between the government and the citizen (Saxena, 2005). At this stage, it cannot be considered anymore as an option but as a necessity for the countries, which aim to achieve a successful and effective governance.

3.2.2. E-Government in Denmark: Progress and Barriers

As mentioned previously, we would like to focus on the e-governance practices rather than on e-government as a whole, however, the OECD Country's Reports, analyzing digital progress and innovation in the governmental sector of different countries, are building their records only on egovernment strategies. The literature review in the previous part of the chapter discussed how interrelated the notions are. Therefore, in order to analyze the country's progress in governmental digital services, the paper will use information from the OECD's 2010 extended report on egovernment studies in Denmark.

Denmark has been using ICT since the 70's, focusing mainly on the automation of the public administration. In the 90's, the technological boom has brought a huge impact creating the basis of what was called later – E-Government. Since then, Denmark has made a considerable progress, and is at the forefront of e-government development and its implementation in the international rankings.

Denmark is a favorable country for a fast development of e-government, mainly because of the following factors:

- 1. Small country with an open economy and high GDP per capita;
- 2. The country ranked in the top UNDP Human Development Index;
- 3. The majority of the population lives in the urban area (85%) and works in the service sector;
- 4. E-Government benefits of high support from the political parties;

Even though the success has been noticeable, Denmark is not pursuing e-government as an end goal, but rather as an enabler for many other objectives such as:

- Making public services more readily accessible to citizens and businesses;
- Facilitating increased efficiency of the administration and enhancing its collaboration with the large public;
- > De-bureaucratization;
- Prioritizing and planning solutions;

Although Denmark was ranked as a frontrunner in the terms of ICT development and electronic government practices, as far as in 2005, when the OECD created its previous analytical report upon the matter, the country has since adopted several strategies in order to deliver high-quality and cost effective services. As a result, the government is increasingly trying to innovate and

transform its operations so that it is able to "do more and better with less". E-Government is considered the most effective tool to reach efficiency and transparency goals within public sector. Therefore, even if the initial project on e-government implementation was supposed to run only till 2006, the strategy was further extended for 4 more years in order to be fulfilled 35 more initiatives. Since 2007, a modernization agenda has been undertaken with the primary aim to make the public administration more efficient, effective and self-sustained.

As a result, the country ranks now in the top lists in terms of : development of the Information Society, number of regular Internet users and government's connectivity with the citizens. Denmark has also ranked among the best performers in Europe in terms of sophistication of e-government services.

Despite the visible success of the Danish e-government process, it is important to identify the existing barriers as well. This will bring a better understanding and ensure an easier implementation. All barriers can be classified in 3 major groups:

- 1. *Legal and regulatory barriers* the complexity of the laws and regulations and their lack of flexibility
- Budgetary barriers budgetary constraints resulting from a lack of internal flexibility on the re-evaluation of the priorities and the reallocation of funds, as well as, disproportionate allocation of costs and benefits between institutions; lack of longterm budgeting horizons;
- 3. *Digital divide* people's limited understanding of potential benefits from egovernment practices.

The OECD for its report has asked the respondents to indicate the most important barriers to e-government service delivery. Figure 2 visualizes their answers.



Source: OECD survey of e-government in Denmark 2009. Question 4.11 How important are the following barriers to the delivery of egovernment services?

Figure 2

The figure shows that 64% of the respondents believe that the most important barrier is the lack of financing mechanisms for shared services and another 52% pointed on the lack of common understanding of e-government within different parts of the organization, as an important barrier. Another popular answer was the incompatibility of the technical standards, with a 42% rate.

42% of respondents answered that they did not see a reluctance to share information about their capabilities and processes, and another 41% saw no lack of confidence in the other actors, indicates on the basic amount of trust between the public sector and the e-government service delivery agencies. (OECD, 2010)

The OECD Report, analyzing the current position of Denmark's e-government practices, shows a high level of development of the country with successful results, realized so far. It also mentions the potential objectives that should be taken into account and the main set of barriers that are still present in the governments' digital service delivery.

The data from the report is important for the study because it reveals the country's potential in terms of digital development. It also points on the barriers that should be overpassed, if the service will be used as a solution for public-private partnerships.

3.3. Public Private Partnerships

3.3.1. Definition and characteristics of Public-Private Partnerships

A common presumption in different countries is that the public sector should be responsible for the delivery of basic services for the civil society. However, the current global financial dynamics and the latest financial crisis from 2008, brought a renewed interest in alternative methods, both in developed and developing countries. In the recent years there have been an increased number of collaborations between the public and the private sectors for the development and the delivery of big environmental and infrastructure projects. These type of arrangements are called Public-Private Partnerships (PPP). Because the field is relatively new and there is a limited number of studies in the specific domain, there is no one widely accepted definition of PPPs, however the PPP Knowledge Lab defines them as *"long-term contracts between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance."* It should be noted that in the exiting literature a number of other definitions of PPPs can be found, however, they are mostly subjective to the personal view and the interests of the author.

One might argue over the choice of using this type of collaborations over traditional financing methods, however, there is a broad range of options and arguments for involving the private sector in the financing and physical development of projects that are traditionally under the scrutiny of the public sector.

A visual representation of public private partnerships' risk sharing practice would be as following:



Figure 3: Risk sharing

At one end, the public sector retains all responsibility for financing, constructing, operating and maintaining assets, together with the responsibility for assuming all associated risks. At the other end, the private sector assumes all of these responsibilities. The majority of PPP projects fall in the middle of the spectrum, with the risks and the responsibilities shared between both the public and the private sector, according to their particular strengths and weaknesses (European Commission, 2003). Under this legal construction, the *partners share risks, rewards, and responsibility for shared investment* (Akkawi, 2010). Therefore, these partnerships are not just simple tools for funding projects, but instead, they require full commitment from all the partners (Witters, Marom, & Steinert, 2012).

Another very important aspect of PPPs is the risk allocation. Whenever a project is started the central question is very often: "who will assume risks in the delivery of a service or in the construction, operation and maintenance of infrastructure?". Traditionally the national authority is attempting to reduce the risks, however, it is not always successful, especially in the case of big, long-term projects. Therefore, the debate shifts towards the potential amount of risk that could be transferred from the public to the private sector. Generally, the more risk is transferred, the more financial reward the private partner will demand. Thus, as a rule of thumb, it is agreed that the risks should be allocated to the party who can best assume them and drag the most cost effective solutions (European Commission, 2003).

In Figure 4, is represented a simplified version of a typical structure of a PPP project. The projects are usually quite complex and involve several contractual arrangements between a number of parties. Therefore, the project's sponsors and investors will aim to establish a separate Special Purpose Vehicle (SPV), to diminish liability for any parent company. The SPV will be used as well to sign the PPP contracts with the government, customers, contractors, financiers etc. and act as a borrower for the project capital. The SPV may not always be directly owned by the sponsors (Napoleon, 2013). Another important characteristic of the SPV is that it cannot undertake any business that is not part of the project, thus protecting the interests of both the lenders and the investors. A SPV can be formed as a joint venture between an experienced company, in charge of the construction or development of the project, and a company capable of operating and maintaining it (UNESCAP, 2011).



Source: UN ESCAP, 2011.



Witters et al. in the study "The role of public-private partnerships in driving innovation" introduce three types of arrangements that the PPP structure can cover. First, PPPs, can be used to introduce private-sector ownership into state-owned businesses through a public listing or through the introduction of an equity partner. Second, it can become a private finance initiative, where the government takes advantage of the private-sector's management skills and awards it the rights for a long-term franchise, in exchange for the infrastructure and further maintenance services that the private sector will be responsible for. Third, it can cover sales of government services to private-sector partners, which have the potential to exploit better the public assets. In all three cases, the private sector will use a SPV (Witters, Marom, & Steinert, 2012).

It is crucial to recognize that both parties in the PPP projects have very distinct final goals and requirements that should be met in order to be able to participate in the partnership. While some goals are complementary, others are not. For the private sector, the most important requirement is to derive profit. In relation to the high responsibility it holds, the private sector is seeking for a potential economic growth, political support and stability, over the life-time of the project. Governments, instead, would generally allow their private partners to make a reasonable profit in exchange for improved services and efficiency, without having to leverage their own resources (European Commission, 2003).

3.3.2. PPPs: Risks and Benefits

Even if countries have experienced an increase in the number of the public-private types of cooperation and have seen successful projects completed, most civil societies still question the feasibility of using projects with such a complex structure. Therefore, this section will present the potential benefits and risks associated with public-private partnerships, and discuss other critical factors for their success.

PPP projects have shown a number of advantages, which they are able to offer:

- Acceleration of infrastructure provision PPPs allow the public sector to process expenditures on an ongoing basis rather than as a pre-determined budget.
- Faster implementation private sector's allocation of the construction responsibility together with availability of funds gives them a higher chance to be delivered in a shorter time frame.
- Reduced whole life costs the private sector has strong incentives to minimize the overall life costs of the projects they are responsible for.
- Improved quality of service PPP services are often better integrating services, have an improved economies of scale, have better performance incentives and less penalties.
- Generation of additional revenues there is the possibility of generating additional revenues from third parties or through the use of spare capacity.
- Enhanced public management and reduced government risk the government officials will transfer certain risks to the private party and will become regulators that monitor the performance and encourage the costs to be benchmarked against the standards of the market rather than monopolized.
- Reduced corruption and increased transparency having both public and private sectors sharing risks for the same projects and monitoring one another, brings higher transparency (European Commission, 2003).

It is important to recognize the overall PPPs' inputs for the innovation process. PPPs help governments become more innovative by giving them access to structures outside the governmental area. They also facilitate the import of new talents and skills, and as well, create a more diligent working culture. The partnerships enable companies and governments find new financial resources and, thus, offer the private sector an advantage in highly competitive environments. Moreover, private companies have the possibility to engage in large-scale long-term projects, which are usually beyond their traditional capacities (Witters, Marom, & Steinert, 2012).

The performance of the PPPs however, tends to generate also a set of risks, such as:

- No unlimited risk bearing the private sector will not take on projects that might generate risks beyond their control, they will wish to know all the rules of game and will expect to have a significant part of the control over the operations.
- Government's risk even if the overall risks are shared between the two parties, citizens will continue to hold government responsible for any possible failure attached to the project.
- No two projects will be the same depending on the area, industry and country, projects will generate different revenues, possibilities and risks.
- Long-term volatility due to the long-term nature of the contracts and their complexity, the biggest difficulty comes from the parties being unable to predict all the possible contingencies, events and issues that might arise (World Bank, 2015).

After having noted the major benefits and risks associated with the PPP performance, it is important to mention the necessary element that would make these collaborations successful. Before initiation, any PPP should first be acknowledged as what it fundamentally is, a partnership. The definition of *partnership* describes it as "an agreement between two or more parties to work together towards a common goal", therefore, this should be the first and main focus on any PPP agenda. Moreover, as in any typical partnership, both parties in the public-private agreements should share joint rights as well as, joint responsibilities. Also, considering the complexity of PPPs, all the agreements, the frameworks, the rights and the obligations of all the parties, must be carefully discussed and crafted well in advance.

3.3.3. PPP and the Information Communication Technologies (ICT) field

Since our research is looking for a potential collaboration between PPPs and of E-Governance, it is important to examine first their position in the field of ICT in general.

Innovation coming from the private sector that involves leveraging the capabilities of ICT, is extremely beneficial in situations when governments struggle to find solutions, this being also the
purpose of the PPPs. Therefore, it is not a surprise that PPPs have gained a particular importance in the ICT sector. Much of the innovation happening, is taking place due to the progress in the ICT, which is necessary for the facilitation and operation of any PPP. Partnerships that incorporate the use of ICT have the power to improve the most aspects in a community: education system, transportation, public safety, healthcare system and even social services, which governments would otherwise cut back because of the budget deficits.

The first step to success in such situations is to make leaders understand the numerous benefits ICTs create. And second, it is important to let know the private sector that ICT-centric PPP projects can create viable business models with self-sustaining schemes.

The latest public-private projects have proven that ICT field is crucial to the effectiveness of the PPP projects. The relationship between PPP and ICT can be described as symbiotic. One one hand, PPPs can provide an ideal vehicle for funding ICT projects and help enable the development of the needed infrastructure, with assurance of an appropriate return on the investment. On the other hand, ICTs can integrate the PPP projects in the lives of the consumers (Witters, Marom, & Steinert, 2012).

3.3.4. PPPs in Denmark

For more than 10 years, PPPs in Denmark have been scrutinized as opportunities for efficiency and innovation, mainly in building and construction projects. They have been regarded, in particular, as a security for a healthy economy cycle. Regardless the fact that the public sector in Denmark can provide cheaper financing than the private one, many public parties see it as an advantage to leave the financing part to the private entities. Therefore, showing a strong indication that the Danish public sector is open for the partnerships (Bardeleben & Puggaard, 2012).

Unfortunately, the number of PPP projects in Denmark has been limited so far and, consequently, available records about the projects' performance is scarce. Even so, at the end of 2012, The Danish Competition and Consumer Authority has published a paper, which evaluated the first 13 PPP completed projects in Denmark. The study only covered preliminary experiences since traditional PPP contracts have a duration of up to 25 years or more (Project Finance Magazine, 2013). The projects' names and progress is summarized in Table 2.

The main findings of the report were overall positive. PPPs in most of these projects helped with the optimization of the total costs and the integration of multiple innovative solutions.

The report noted that in 9 out of the 13 projects, the quality of the PPP buildings was higher than in traditional building projects, and in the rest of the projects the quality was found to be equal. Public procurers were especially pleased with the fulfillment of all the requirement from the original contracts and with the possibility of the risk transfer to the private party.

There are, however, two drawbacks that should be mentioned. First, some of the projects cannot be fully catalogued as public private partnerships because certain private companies involved have as a main shareholder - the state. Thus, they fulfill only partly the requirements of a typical PPP. Besides that, there are, in fact, only two clear examples of large scale infrastructure PPPs in the entire Danish public sector: a school in Jutland and the building of the national archives.

Completed Projects by Autumn 2012					
Project	Contracting authority	Date contract was concluded	Financing (Private/Public)	Ownership of asset at the expiry of contract	
Projects procured by municipalities	/regions				
New car park in Randers	Central Denmark Region	Jun/11	Private	Public	
School in Frederiksbaxn	The municipality of Erederiksbayn	Jul/11	Public	Public	
Nursery in Hørning	The municipality of Skanderborg	Apr/11	Private	Public	
Ørsted school in Langeland	The municipality of Langeland	Aug/08	Private	Public	
Vildbjerg School	The municipality of Herning	Oct/05	Private	Public	
Aalborg State Archives	The municipality of Aalborg	May/10	Private	Public	
New car park in Aarhus	University hospital of Aarhus	Mar/10	Private	Public	
School in Helsinge	The municipality of Gribskov	Oct/10	Public		
Projects procured by the Danish Sta	ate				
The Highway Kliplex - Sønderborg	The Danish Road Directorate	Feb/10	Public	Public	
The Danish State Archives	The Danish building authority (Bygningsstyrelsen)	Jun/07	Private	Public	
Court project	The Danish building authority (Bygningsstyrelsen)	Jun/10	Private	Public/Private*	
Registration Court in Hobro	The Danish building authority (Bygningsstyrelsen)	Dec/07	Private	Private	
The Danish Court in Roskilde	The Danish building authority (Bygningsstyrelsen)	May/12	Public	Public	
*The commissioner in entitled - but u	under an obligation - to buy the a	asset at a fixed	price		

Table 2: Completed PPP Projects by Autumn 2012 in Denmark

Another opportunity to get an insight in the Danish Public-Private Partnerships progress is by taking a look at the national healthcare system, which has attempted to use the PPP type of

collaborations. They can be found at the national, regional and local levels and their prospect go from developing a national e-Health system and sharing of physical resources between hospitals to catering and cleaning services. The projects are very diverse especially at the regional level. Some examples of public-private partnerships are:

- **National Level:** *MedCom* national e-Health system and *KRAM*, research and information for public health care system improvement.
- **Regional Level:** *Jusk Linnedservice A/S* cleaning service partnership, *Steno Diabetes Center and Rigshospitalet* partnership entailing the share of physical resources, information and research
- **Municipal Level:** several service delivery PPP constructions that have been already established or are currently planned (Eldrup & Schütze, 2013).

Since 2012, the Danish government has entered in several other PPP agreements. They involve a very promising large-scale project aiming to merge two psychiatric departments at the Aarhus University Hospital, a new maternity unit at Slagelse Hospital, a new psychiatric center in Skejby, several schools and office buildings and also large infrastructure projects funded by the three Denmark's biggest pension funds (Project Finance Magazine, 2013) (Infra PPP, 2016).

Despite the positive reviews of the previous projects and the opportunistic upcoming activities, the Danish public sector has been rather cautious in its approach to the use and the spread of PPPs, compared to its neighbors such as: UK, Ireland or Netherlands. This is caused by a number of reasons:

- 1. Being a Scandinavian welfare state, Danes are historically inclined to expect public service delivery rather than private sector involvement in the welfare services.
- 2. Contrary to many other countries that are benefiting from PPP services, Denmark has not established a central PPP department or platform for its development.
- 3. The mandatory screening process for all state PPP projects that have a budget exceeding 10 mil. Euro, and the needed for approval from the financial committee, makes it an unattractive model.
- 4. The requirement for municipalities to deposit an amount similar to the construction costs of the project, for municipal activities with private financing. This being argued

as a limitation to excessive public spending on new facilities that might endanger the opportunities for future generations.

- 5. No clear set of rules for the tax and VAT treatment of PPP projects, which creates insecurities.
- The small size of the country limits the budget spending, the number of willing private companies to enter into the partnerships and the expertise from both parties (Eldrup & Schütze, 2013).

In addition to all these impediments, it has been highly debated whether it is a right choice to choose PPP services, since the public interest rate in Denmark is significantly lower than the interest rate on the financial market (Kristiansen, 2009).

If it is to use a very broad definition of PPPs, Denmark would have a history in various types of collaborations between the public and the private sectors, however if we use the narrower definition, touching mostly the infrastructure area, Denmark has been only involved in a couple of large-scale partnerships. Moreover, the government's PPP policy has been somehow ambiguous and not very encouraging, with no well-defined regulatory frameworks or clear policies. Some of the political parties, have also shown very little enthusiasm about PPPs (Vranbgbæk, 2008). All these factors cause an insecure atmosphere for the private agents, who are reluctant to enter in long-term partnerships with no clear guidance.

Regardless the fairly gloomy barriers and considerations, there is still a positive trend towards the use of PPP projects and the numerous possibilities they could bring to the society. The inclusion of public-private partnerships is still an open discussion in Denmark in terms of their potential in the national context.

3.4. The GRC Approach and Its Importance

When discussing partnerships and collaborations between the public and the private sectors, E-Governance and new forms of development and innovation, it is pivotal to review them though the lenses of a mediator factor, and more specifically GRC or Governance, Risk Management and Compliance.

GRC has rapidly penetrated the business community over the last years. However, as PwC noted "In itself GRC is not new. As individual issues, governance, risk management and compliance have always been fundamental concerns of business and its leaders. What is new is an emerging perception of GRC as an integrated set of concepts that, when applied holistically within an add significant value and provide competitive organization, can advantage." (PricewaterhouseCoopers, 2005). Regrettably for the business world, the awareness about the GRC concept is rather low, specialists struggle to describe it and the definitions are very varied. That's all caused by the lack of scientific research.

Regarding the definition, Banham (2007) in his research, cites a consultant who prefers to look at the concept from a technological point of view:" GRC is more a technology platform for illuminating governance and compliance risk. It is useful to think about GRC in terms of an IT platform. [...] The technology helps you centralize and organize your policies, procedures, documentation requirements and other content for dashboard reporting." (Banham, 2007). KPMG, however, believes that GRC "is more than a software solution; it is a strategic discipline. GRC is a continuous process that is embedded into the culture of an organization and governs how management identifies and protects against relevant risks, monitors and evaluates the effectiveness of internal controls, and responds and improves operations based on learned insights." (KPMG, 2008). Corporate integrity goes as far as calling GRC a "philosophy of business" that "permeates the organization its oversight, its processes, its culture" (Corporate Integrity, LLC). One of the wider accepted variation of the definition of GRC is the one published by The Open Compliance & Ethics Group. They introduced GRC as "a system of people, processes and technology that enables an organization to understand and prioritize stakeholders expectations; set business objectives congruent with values and risks; achieve objectives while optimizing risk profile and protecting value; operate within legal, contractual, internal, social and ethical boundaries; provide relevant reliable and timely information

to appropriate stakeholders; and enable the measurement of the performance and effectiveness of the system." (OCEG, 2009).

Before discussing GRC in relation to PPP projects, all three key terms have to be defined first.

Governance is defined as the framework of rules and practices by which the management ensures accountability, fairness and transparency. In a partnership, in involves procedures regarding responsibilities, rights, and rewards. **Risk** involves the probability of loss that may impair in the returns on investment. And lastly, **compliance** is the confirmation that the doer of an action meets the requirements of accepted practices, legislation, prescribed rules and regulations, specified standards, or terms of a contract. (King & Khan, 2012)

GRC in our case plays a very meaningful role. Collaborations as complex and long-term as Public-Private Partnerships involve a lot of risk sharing, financial compliance from both parties, a base of rules and regulations covering behavior and decision making, and just an overall ethical basis.

In order to understand the real importance of GRC in PPPs, first, we have to eliminate the common misconception about PPP projects that they mainly relate to the public sector financing of public infrastructure. Actually, the financing is just one aspect of the whole process and the public sector is purchasing a service rather than an asset. A PPP is basically a risk sharing relationship between the public sector and private businesses, and our focus will be on the words "risk sharing", because in PPPs risk allocation is a much more compound process than in any other types of partnerships. This is coming from the fact that risk is not just shifted to the private sector but rather allocated to the party that is best suited to manage it. PPPs are a lot about value for money and reasonable costs, thus, those in the best position to manage a particular risk at the lowest price will have to take it (Lewis, 2001).

Public-Private Partnerships require a big amount of compliance and good governance from both parties, since its final purpose is public benefit. The complexity of the contracts makes it important to set up a transparent environment with active consultation and engagement of stakeholders. Therefore, the first role of the political leadership is to ensure public awareness of the costs, benefits and risks related to the PPP projects and, as well, to appoint the key institutional roles and responsibilities. Especially in the assignment of the roles, GRC is very important because the institutional authorities of the SPV are entrusted with the resources and the procurement processes. They are expected to secure affordability and project quality.

PPPs are also subject to a rigorous selection process and get prioritized by the government. The decision is usually based on the government's perspectives, thus, there should be no room for institutional, procedural or accounting bias. Both parties are guarded against waste and corruption, therefore, GRC in this case is an instrument for enhancing integrity and recognizing whether management's actions are appropriate (OECD, 2012).

In order to have a better picture of the GRC's input in real life situations, a great example of collaboration based on good governance principles is the alliance between the public limited company Københavns Lufthavne, which operates Copenhagen Airport, and the state owned independent corporation Naviair, which is in charge of the air traffic control at Copenhagen Airport. Their partnership involves a lot of consensus oriented practices from both sides. Since Naviair is the only ones in the possession of insider knowledge and control of the airport's traffic, they have to act transparently, and equitably, without jeopardizing the airport's reputation, and in the same time, the management of the airport has to be responsive to the idea that they will not have a continuous access to information exceeding their professional competences. GRC in this situation gives them the opportunity to act efficiently while making the most use of the resources at their disposal.

Therefore, in complex frameworks as PPPs, in order to get the desired outcome, there is a need for a sophisticated and comprehensive structure, such as GRC, that would cover all risks for both parties involved and would allow the partnership to become a constructive collaboration instead of a hierarchy.

3.5. E-Governance in Public-Private Partnerships: Towards a New Model

After having analyzed each concept individually and all their aspects, in the last part of our literature review it is finally possible to discuss an opportunity for a digital cooperation between E-governance and Public-Private Partnerships.

The chapter will present a summary of the literature review points and important facts about the case country: Denmark. The outline will include key information about Denmark's position in relation to: digital development in the public sector, E-Government and E-Governance practices and PPP history and results. The information can be seen in Figure 5.

The summary shows a high development level in digitalization processes, in the public sector. It also presents a very positive review on the governmental electronic services offered to the citizens. The PPP revision, however, displays a short history with a limited number of projects realized so far. It also shows the multitude of barriers existing, which, in turn, create skepticism and prevent the development of the partnerships.

Nonetheless, the review provides a full picture of theoretical data about Denmark and its position in relation to a possible collaboration between E-Governance and PPP services.

The information will be further used in the analysis process in order to create a new model for a potential PPP Platform in Denmark.

PPP History and Results	 Short history in PPP 13 completed projects in infrastructure by 2012; existing projects in educationa nd healthcare systems Several new PPP agreements established recently Barriers: Absence of a centralized PPP department of PPP Platform Lack of clear regulations and frameworks Mandatory screenign process and need for approval from the financial committee Mandatory deposit amount for municipalities Higher interest rate on the financial markets Skepticism
E-Governance and E-Government Progress and Barriers	 Frontrunner in electronic government practices Highly developed comunication and cooperation portals and networks High indicators in user centricity and trasparency First country to introduce mandatory digital post Continuous modernization of the digital technologies Involvement and support at governmental levels Barriers: Legal and regulatory barriers; Budgetary barriers; Digital devide
Digitalization in the Public Sector	 80% of the population has access to internet Between 80% and 90% of governmental institutions benefited of at least one type of innovation 50% of consultancy services and R&D sourcing in the public sector are coming from the private sector 58% of public sector institutions cooperate with businesses Barriers: Lack of funding; Internal barriers (time; incentives); External barriers (rules; lack of suppliers; resistant users); Lack of flexibility in the legislation
Denmark	

Figure 5: Literature review summary on Denmark



The following chapter, will present the empirical analysis of the paper. As stated in the methodology section, there have been performed a set of semi-structured interviews with 6 key people, who specialize in public-private partnerships and work closely with them. Therefore, the chapter will start by introducing the method used for conducting the analysis of the interviews and discuss the rationale behind it. Subsequently, the information obtained through interviews will be coded and analyzed in relation to the literature review and Project Gate 21. The chapter will end with the creation of a new analysis model for a potential PPP platform in Denmark.

4.1. Using NVivo to create the Analysis

For the empirical analysis, the interviews transcripts were run through the NVivo software. NVivo is a software that supports qualitative and mixed methods research, designed to organize and analyze qualitative data (QSR International , 2016). The method was chosen because of its simplicity and efficiency. The main purpose, when working with NVivo, was to codify the interviews and find common patters, through the answers, that would help build an objective result. This method also eased to see the links between the interview answers and the theoretical ground.

Firstly, the interview transcripts were uploaded in the software and case profiles were created for each respondent. It included details about their job and the organization they are part of. This was required because all the interviewees have different backgrounds and a different relation to PPP projects, therefore, their answers reflected specific areas or situations. Without specifying their professional domains, the information can become confusing to the reader.

Occupation		
Name ^	Position	∇ Organization ∇
Carsten Greve	\bigcirc Academic Director	
Christian Bason	${\bf Q}$ Management consulting for Government	${\bf Q}$ Danish Governmental Agency
Mads Eriksen	Q Lobbyst	${\bf Q}$ Corporation of Professionals
Niels Ejersbo	\bigcirc Senior researcher	$ \subset $ KORA Danish Institute for Local Government
Paul du Gay	\bigcirc Academic Director	Q CBS PPP Platform
Robert Hinnerskov	Q General Secretary	${\bf Q}$ Danish Fundraising Association

We can see the data from the software in the figure below.

Figure 6: NVivo display of the respondents' occupation

Secondly, all the answers were codified in 8 main nodes, node being the name for code in NVivo (QSR International , 2016). Since the interview questions were very specific on the subjects needed to be covered, the nodes created are primary based on the main themes of the questions. The 8 nodes are related to the public-private partnerships in the context of Denmark and more specifically: their current recognition status by the civil society, the businesses and the government; their current challenges and their potential areas for development, as well as, interviewees' familiarity with the notion of E-Governance and their opinion on the potential collaboration between the two. Furthermore, it was chosen for certain nodes to get further expanded in more specific subcategories. This decision was based on the similarity in answers of the respondents.

Figure 7 displays the 8 nodes and their subcategories.





Lastly, using the nodes and the classifications, there have been performed several tests and queries. This allowed the creation of the analogy between the interview results and the theoretical foundation created earlier.

4.2. Nodes and sub-nodes choice, classification and discussion

As mentioned above, 8 main nodes were created during the coding process. 4 of them were further expanded in subcategories. They will be now analyzed in the context of the literature review.

4.2.1. Current Coverage Node

The first node is **Current Coverage**. All the respondents mentioned the poor inclusion of the PPPs by the government's agendas and about the limited work in the field. Carsten Greve mentions about the discrepancy between the governmental policies and the actual activity (Appendix 1) A point that was supported also by the other respondents. The presented literature review also argues that Denmark's government lacks initiative "...*the Danish public sector has been rather cautious in its approach to the use and the spread of PPPs, compared to its neighbors*..." (Eldrup & Schütze, 2013)

4.2.2. Current Challenges Node

The consequent node, **Current Challenges**, is related to the ongoing situation as well, and is reflecting the question concerning the challenges faced by PPPs in Denmark. It is also the first node to be further subcategorized because the interviewees gave analogous answers. The subcategories are: "Risk allocation", "Lack of knowledge and experience", "Lack of cooperation" and "Lack of PPP market". Even though, "Risk allocation" was mentioned only in the interview with Paul du Gay,some concerns around on how exactly how these contracts are developed and where the risk is actually allocated. Because, at the end of the day, the risk ends up being again with the public sector...." (Appendix 5), it has a high importance in the study. Arguments can be found also in the Literature Review, "the government officials will transfer certain risks to the private party and will become regulators that monitor the performance and encourage the costs to be benchmarked against the standards of the market rather than monopolized" (European Commission, 2003).

The next two sub-nodes, "Lack of Knowledge and experience", and "Lack of cooperation", have the highest number of references and are closely related to each other, as they share the same basis. Christian Bason, mentioned that one of the biggest flows of PPPs in Denmark is the lack of the *"big picture"* (Appendix 2). Mads Eriksen stated that there is *"a lack of cooperation"* and *"no learning"* process (Appendix 3), and most importantly, all the respondents pointed on the big gap in the knowledge and experience because of the very small number of projects that got implemented,

"Our experience, our knowledge, also the long term effects are very limited" (Appendix 4). Especially these two sub-nodes draw a clear picture of a need for a centralized platform, which would connect and direct the existing PPP programs, so that all the organizations are able to get consultations and cooperate with each other. A centralized program would minimize errors' repetition and would improve drastically the learning curve in the PPP process. The last sub-node is "Lack of PPP market", based on Carsten Greve's answer where he mentioned that a PPP market is needed in the context of having a pipeline of projects (Appendix 1). It has to be remarked that the importance of having complementary projects implemented in the same time, was recognized by several respondents.

The literature review confirms the possibility of having a pipeline of projects because of the small size of the country and the limited number of private companies (Eldrup & Schütze, 2013). Having a pipeline of similar projects, would make private companies benefit from "economies of scale" in what concerns the infrastructure implementation, as well as, bargaining extra benefits. In the same time, the civil society would gain a range of high standard services.

4.2.3. Potential Expansion Area Node

The third node is **Potential Expansion Areas**. As the previous one, it was further expanded in 4 subcategories, all of them covering respondents' opinion on areas PPPs in Denmark should focus on in the future. Christian Bason made an interesting point: "...*it comes to areas where the private sector simply has a critical mass of skills*..." (Appendix 2), a reasoning that is backed up also by the literature "...*it can become a private finance initiative, where the government takes advantage of the private-sector's management skills and awards it the rights for a long-term franchise, in exchange for the infrastructure and further maintenance services that the private sector will be responsible for."* (Witters, Marom, & Steinert, 2012).

The 4 sub-nodes are related to each other in their main characteristic – large scale projects. They also cover the most important aspects for a civil society, such as healthcare and education systems. A common answer was related to large innovational projects. Considering the description of Danish PPPs, it is not a surprise, since Denmark is in the top most innovative countries. Robert Hinnerskov mentioned another curious point:" ...*I think, we should perhaps look at the European level, at least, so that it is not just a Danish phenomenon we are talking about. So, I think we should broaden the PPP perspective, and also come to an international and cross-border perspective...." (Appendix 6). Considering the previous concerns of the respondents, about the lack of knowledge*

and background in the Danish PPP, Robert's statement comes hands in hands with a solution for the problem. A collaboration with neighbor countries for increasing the ground of insight and expertise would reduce multiple risks related to public-private partnerships. Moreover, in what concerns the research question, a cross-governmental collaboration could increase the efficiency in the process of creation and implementation of a PPP platform.

4.2.4. Need for a Platform Node

The forth node – Need for a Platform, is directly related to research question. It reflects the opinions of the interviewees upon the need of a centralized platform for PPPs in Denmark. All of them agreed on it, some specifying that the organizations they are part of, are already working towards this goal. Mads Eriksen stated that one of the main policies he is handling is pushing the government towards creating this type of platform, "...It is essential to have better cooperation..." (Appendix 3). Christian Bason indicates the big discrepancy in the system by asking a critical question: "how do we even connect with the private sector?" (Appendix 2)", and Paul du Gay stressed on the importance of authorities to be present and in charge: "...I think undoubtedly it will be the case. I mean although there clearly has been central governmental authority given to units to develop a policy of increasing PPP, the greater the degree of centralization and authority, will definitely be of use, and obviously be able to allocate that practice more widely I think. So, I would say yes, that definitely is something that should be developed..." (Appendix 5). All positive outlook of the respondents, concerning the need for a platform for public-private partnerships, gives a confident perspective to the current paper. Their answers also stress the pivotal demand is in all the fields related to the PPP sector.

4.2.5. Potential Platform's Characteristics

The next node is **Potential Platform's Characteristics.** The respondents were asked to express their point of view on which features should a potential public-private partnerships platform possess and also elaborate on its potential goals. The ideas received were quite diverse specifically ranging through the domains of the interviewees. Therefore, there is a higher number of sub-nodes.

The first aspect categorized concerns reducing the costs of the PPP projects. Two of the respondents mentioned how pricey the implementation of this type of partnerships can become, thus, a centralized platform should focus on reducing these costs and provide an electronic base of organizations that would be able to offer their services at a lower price. "One question is that it is

actually, very costly to set up PPPs, and the platform could maybe reduce these development costs. " (Appendix 4). Looking back at the Literature Review chapter, specifically at the risks and drawbacks associated with public-private partnerships in Denmark, there is a broad variety of costs tied to mandatory screening processes and deposit amounts for the municipalities (Eldrup & Schütze, 2013). All these charges make PPPs seem risky and inconvenient and consequently increase the market interest rates tied to the private parties. Accordingly, the cost reduction element is vital for the future development of PPPs.

Another potential feature that has been mentioned was that the platform should focus on the recruitment process. Both academic directors of CBS PPP Platform view it as the first most important task: "...the main task is to recruit some people who are competent..." (Appendix 1). Paul du Gay explains that since this type of partnerships is only feasible because of its longevity and large scale, PPPs need a lot of good talent, in order to deal with unexpected circumstances "recruitment leads to a situation where you effectively do not have long term capability and capacity you do not want to be in a situation where the nature of personnel..." (Appendix 5). This point of view is again confirmed by the literature which discusses long-term volatility risk (Eldrup & Schütze, 2013), which doesn't let the parties make precise predictions, therefore, they need "the right kind of professional competences" (Appendix 1).

As mentioned in the Current challenges node, one of the biggest problems associated with Danish PPPs is its current inability of designing pipeline projects across the country. Thus, it was no surprise when there were suggestions made about this point "...we need to make a pipeline for projects, for example, when you build a school then you could actually build ten schools around the country. All of the ten schools could have the same contract and this could make it cheaper for the public sector and make it more attractive for the private one." (Appendix 3). It was created a separate sub-node "Pipeline" for this idea. However, analyzing World Bank's report about different risks associated with PPPs, there is an argument that contradicts this idea "No two projects will be the same" (World Bank PPP, 2015), thus, the creation of pipeline projects would not solve individual issues related to specific circumstances.

Another subcategory is "Models and Frameworks". It is probably one of the most important ones considering that Denmark has no clear set of rules (Eldrup & Schütze, 2013), which in turn inflicts a multitude of questions, insecurities and debates. "...*it could present different models of sharing, development, or make analysis about how the market is developing in certain areas, so it*

should be easier for local governments to actually initiate PPP projects.", explains Niels Ejersbo (Appendix 4).

Next sub-node, "Innovation", is also related to Denmark's lack of experience in the field. Two interviewees argued that a potential platform should present different solutions and possibilities for new projects for public-private partnerships, where "...*it could be a fruitful cooperation between public and private sector*..." (Appendix 3). Christian Bason stated that it is the role of the government to innovate and create new solutions (Appendix 2). It has been previously discussed also by Witters, Marom & Steinert (2012) who pointed that "*PPPs help governments become more inventive by giving them access to structures outside the governmental area. They also help to import new talents and skills, and as well create a more diligent working culture.*" Therefore, a potential PPP platform should also present innovational governmental answers to existing problems.

The last subcategory created is "Connection", and is again related to the present issues of public –private partnerships. It is a very significant point because it relates to the base of the characteristics for a potential platform in Denmark. Connection is a critical element in any successful partnership. The node, therefore, is also connected to some of the previous ones and their subcategories, which specified the big gap in connection between public and private sectors. Robert Hinnerskov points that the new platform should be structured with members from all spectrums, such as: municipalities, government, industries, businesses and civil society. He also mentions that the platform should not only connect within the country, but rather have "…an European perspective" (Appendix 6).

4.2.6. E-Governance Familiarity Node

The next node is **E-Governance Familiarity**, and it contains information on respondents' general knowledge about e-governance concept. Out of the 6 interviewees, only Mads Eriksen was not familiar with the concept (Appendix 3) However, due to his extended knowledge in the field of PPP, his next answers would have been significant to the study, therefore, he got a brief explanation about both the concepts of E-Government and E-Governance. The rest of the respondents were very comfortable with the subject, some of them having worked closely with the digital service.

4.2.7. View on E-Governance in PPPs

The following node, **View on E-Governance in PPPs**, is the most important in the whole list because it shares the opinions of the specialists on the research question in this paper and provides critical judgments on the subject. The respondents had the liberty to reflect on the question without being biased by any external opinion, and they were left to deliberate on the subject without interruption. Therefore, the paper got a lot of useful knowledge and opinions from different industries related to the research question. The most interesting fact is that all the specialists, even though having different backgrounds and relation to PPPs, agreed on the possibility of using E-Governance as a development platform for public-private partnerships in Denmark. Moreover, they explained in which areas it is best to be used and what are the possible consequences.

Christian Bason explained how E-Government being such a well-integrated and critical part of the Danish society, its services, or e-governance, is "...where you can find very interesting new ways...where the government can build new infrastructures, standards, platforms, and arenas, where then private actors can play their role and citizens can play their role." He also points on the advantage Denmark has, a country where approximatively 80% of the population has acces to any digital services. . Position that many other, even highly developed, countries do not have (Appendix 2). Mads Eriksen pointed on the possibility of using e-governance as a means of decreasing bureaucracy, because public-private partnerships have a lot of control mechanisms attached to them (Appendix 3). The literature on PPPs in Denmark also argues about PPPs overly complex system, which requires a very wide set of bureaucratic conditions 'No clear set of rules" (Eldrup & Schütze, 2013). Lastly, Carsten Greve described how this possibility could be used in several ways. Firstly, he pointed on how e-governance tools could improve the project management through its support and available tools. Carsten also noted that the European PPP Center is focusing its work on having an exchange platform for projects and ideas, and, that e-governance could act as a selection gate for them (Appendix 1). A point very well sustained by Saxena (2005) in the literature, discussing the characteristics of e-governance process in Denmark and its possibility to enhance public management through a great level of transformation of the government – citizen relationship.

Niels Eriksen pointed that E-Governance could become the next step in PPPs development but had difficulties on further expressing his idea (Appendix 4)

4.2.8. Potential Challenges Node

The last node, **Potential Challenges**, is directly related to the "potential platform's characteristics" node, because once the respondents started discussing the possibility of using E-Governance as a platform for PPPs they realized that, despite the many benefits the collaboration could bring, it would also involve a multitude of challenges when it comes to its implementation and application. Because most of them shared the same concern, it was decided that the node would only have one subcategory. The sub-node is named "Increased complexity" and it was a common drawback the respondents saw coming together with the platform. Paul du Gay mentioned that an alliance between 2 very complex and big structures could increase "...*the overall capacity of the system to deliver, to maintain capacities...*", and more important it could decrease the level of personnel and expertise. He argues that these types of critical changes are extremely difficult to implement and could cause a disruption in the technological area (Appendix 5). Robert Hinnerskov also notes that it is very important to keep in mind that the implementation of the platform should be very specific in its goals and strategies, so that "...*it doesn't become a platform about everything.*" (Appendix 6).

Figure 7 visualizes all the previously discussed points. It pictures the 8 main nodes, with their subcategories, and their relation to the literature review and to the information gathered through the interviews. It can be noted the similarities and the differences between the information in the existing researches and the opinion of the professionals in the PPP domain.



0					
•	13 completed projects (Project Finance Magazine, 2013) 15 projects started after 2012 (InfraPPP World News) e-Health system (Eldrup &Schütze, 2013)		Current Coverage		 Discrepancy between the governmental policies and the actual activity Poor inclusion in governmental agendas
	Civil society's scepticism around the private sector service delivery Lack of a central PPP department and PPP platform Unattractiveness due to mandatory screeneing processes Fear over excesive public spending No clear rules about tax and VAT Limited budget spendings Public interest rate lower than the interest rate on the financial markets (Eldrup &Schütze, 2013)	odes	Current Challenges	nterviews	 Risk allocation Lack of knowledge Lack of experience Lack of cooperation Lack of a PPP market
•	Potential projects in social and healthcare system Potential Infrastructure projects Potential projects in the transportation system (InfraPPP World News)	Ž	Potential Expansion Areas	terv	 Areas where the private sector has the right set of skills Large scale infrastructure projects Innovational projects International and cross-border projects Healthcare system Educational system
	It is mentioned the lack of a centralized institution or platform (Eldrup & Schütze, 2013) However there is no extended research or literature on the need for a development platform		Need for a platform		 Essential for a better cooperation Possibility of connection with the private sector
	The requirement for municipalities to deposit an amount similar to the construction costs of the project (Eldrup & Schütze, 2013) Long-term volatility risk due to the parties' inability to predict the potential issues (World Bank, 2015) No two projects will be the same (World Bank, 2015) No clear set of rules (Eldrup & Schütze, 2013) PPPs help governments become more inventive by giving them access to structures outside the governmental area. They also help to import new talents and skills, and as well create a more diligent working culture(Witters, Marom, & Steinert, 2012)		Potential Platform's Characteristics		 Development costs reduction In charge of the recruitment of the right set of professional competences Help the creation of a pipeline of similar projects Design models and frameworks for PPP projects Create innovation Become a connection point between the government, the private sector and the civil society
•	The literature review presents an extensive review on E-government and E-governance services		• E-Governance Familiarity		Working closely with the digital governmental services
•	Mandatory screening processes, the requirement for municipalities to deposit an amount similar to the construction costs of the projects, makes it an unattractive model (Eldrup & Schütze, 2013) E-Governance is perhaps the second revolution in the public management, which may transform not only the way in which most public services are delivered, but also the fundamental relationship between government and citizen (Saxena, 2005).		• View on E-Governance in PPPs		 80% of the population has digital access A means of decreasing bureaucracy Improve the project management Potential exchange platform for projects and ideas Selection gate for potential projects
•	There is a lack of information on this point in the current literature		Possible Challenges		Increased complexity Implementation difficulties

Figure 8: Summary of the nodes and their relation to the literature review and to the interviews' data

4.2.9. Word Frequency Test

After coding the interviews, the next step was running a text search test for each node, in order to get the percentage of words frequency. The purpose of the tests was to show whether there is a certain idea prevalence in each node, therefore, drawing a pattern for the coding process. The full results can be found in the Appendices. The analysis will not discuss in detail the obtained percentages, because not all the words, in the words frequency lists, are relevant, instead it will take a look at certain summary maps, which create a better visual understanding of the interview results.

If it is to pick the main nodes that would give the most insight for the research question, then it would be the following:

- Need for a platform
- E-governance Familiarity
- Views on E-Governance in PPPs
- Potential Challenges

Therefore, for these 4 nodes it was created the summary maps of words frequency which is displayed below.



Need for a platform



Views on E-Governance in PPPs



E-governance Familiarity



Potential Challenges

Due to the spheric representation and the difference in sizes based on the words' frequencies, the words frequency test draws a visual parallel between the literature findings and the answers received through the interviews.

The first pattern displays a clear answer to the question regarding the need for a platform for public-private partnerships. The second pattern is important because it proves that the respondents are familiar with all the aspects of study, including E-governance, despite their professional background. The third pattern shows the key words used by the interviewees in order to express their opinions on using E-Governance in PPPs as a development platform and the last pattern shows their concerns about doing so. The last two images are inter-related and take the study closer to finding the answer to the research question.

4.3. Nodes' analysis in the context of E-Governance and Public-Private Partnerships

The following chapter is going to discuss the nodes in relation to the two analysed topics: E-Governance and PPP. In order to to create a consistent analysis, the nodes will be bridged to two specific cases: The OECD Report on "Efficient E-Government for smarter public service delivery" and the case of Project Gate 21.

The literature review about e-governance services in Denmark includes data from the 2010 OECD report on the efficiency of e-government in Denmark. The report highlights the main challenges and the questions to be addressed by the Danish government to ensure an optimal use of the e-government to make the public administration more effective. The suggested improvement for e-government practices offered by the OECD can bring an insight on how the results could positively affect the created nodes.

The following part of the analysis is going to be based on the OECD E-Government Studies "Efficient E-Government for smarter public service delivery" 2010 Report.

In the report, the OECD is addressing four areas of focus:

- 1. The impact of e-government on the public sector modernisation and efficiency efforts;
- 2. The governance framework for e-government development and implementation
- 3. Strengthening citizens and businesses' engagement.
- 4. E-government benefits realization

The first focus area is suggesting the adoption of a holistic approach to e-government development, which should enable public sector modernisation and efficiency. Placing e-government in the wider context of other public agendas and reform programs can help ensure the effective alignment and coherence of various policy areas. However, the country study has revealed that even if the Danish Government has made considerable efforts to ensure improvements, the exploitation of e-government and innovation as means to drive change, at times still appears to be siloed. (OECD, 2010) This limitation is critical for the study because it highlights the very big development gap, which exists due to the inconsistency and misuse of digital solutions in more areas and in less traditional ways.

The OECD recognises the tremendous impact that e-government and e-governance services could have on the public sector modernisation efforts, which gives the research a good ground to build its assumptions on. Having an alignment between e-government and different public sector reform agendas and focusing on government processes rather than on e-government as an individual policy area, as proposed by the report, would contribute to the proposition of developing a potential platform using e-governance. Figure 5 shows that there exists a digital divide barrier, therefore improving connectivity levels between organisations, would facilitate the creation of the PPP platform. Moreover, embracing a broader vision of e-government and withdrawing its traditional uses, can increase efficiency and innovation. It should be noted that the OECD report proposed, as a solution action, the identification of priorities when developing visions for future initiatives (OECD, 2010), a point that was mentioned as well in our interviews by Mads Eriksen "*better prioritization*" (Appendix 3) when discussing the characteristics of a potential platform for PPPs. This proves how interdependent the services are and how a possible partnership could have a beneficial mutual effect.

The second area of focus concerns collaboration and coordination across levels of the government. The OECD reports that the Danish authorities have focused on the establishment of frameworks and structures to engender multi-level collaboration, as well as, support an effective development. It also says that although the current governance frameworks have led to considerable achievements, further strengthening is still desirable. The Steering Committee for Cross Governmental Cooperation was criticized for insufficiency in its authority, for being unclear and ineffective. Moreover, the authorities were condemned for taking a fragmented approach in the power-sharing between the central government and the municipalities (OECD, 2010). Unfortunately, this had a snowball-effect on the public-private partnerships as well. This was confirmed in our interviews, when the respondents mentioned that the lack of cooperation at the governmental level, whether central or municipal, is affecting PPPs activities: "There is no big picture" (Appendix 2); "*Lack of cooperation (...) there is no learning on the success and failure*" (Appendix 3). More data can be found in the Current Challenges node, Lack of Cooperation subcategory, and in the suggested attributes for a potential PPP platform.

In this sense, OECD's proposals for actions can benefit not only the electronic governmental services but, also, the other related organisations. It suggested improving collaboration through concrete activities and projects, and, as well, strengthening the sub-national level by engaging it in creating joint-solutions (OECD, 2010). Both ideas would also speed the development of public-private partnerships and create a greater flow of knowledge between the parties. They would improve

the learning process based on other project's failures and reinforce the collaboration and co-creation between communities.

The third area of focus exploits opportunities of getting a more citizen and business-centric approach. The report discusses that the Danish government has not maximized the use of ICT services for delivering higher national support. In most cases, the platforms are already in place but the existing strategies did not match the development level of the platform. OECD also points that the crossgovernmental channel managing strategy, in charge of the service delivery across the agencies, did not receive the originally indicated attention, and the Domain Board in control of the strategy, was not active enough (OECD, 2010). This flaw has had its effects on the public-private partnerships' progress as well. The lack of dialogue and cooperation between the government and the businesses and the government and the citizens, created misunderstandings in the civil society's priorities and the private sectors' abilities. The interview respondents mentioned the limited coverage of PPPs in the Danish society. "I think you could always do more" (Appendix 6). They all talk about the importance of getting the government more ambitious, take advantage of the various partnerships' possibilities, and, as well, reduce the discrepancy between the policies and the actual activities. "Denmark and the Danish government is often less ambitious and less radical than in other countries" (Appendix 2); "there is a little bit of discrepancy in the governmental policies and the actual activity on the ground" (Appendix 1).

In order to tackle the above challenges, the report suggests adopting an approach that prioritises end-users' needs and aims at realizing the potentials of digitalisation to improve citizens' life. Strengthening the dialogue with businesses and citizens would raise the level of public awareness and recognition of government's initiatives. This strategy would bring a massive improvement to the current challenges in the public-private sector, as well. A better communication with both citizens and the private sector would increase the potential of the partnerships and bring more innovative ideas. Moreover, the interviews' data shows a very limited and a very traditional view on the potential expansion areas for PPPs: infrastructure, education and healthcare systems were the predominant answers. This fact is also a consequence of the limited cooperation and communication. The flow of good ideas is blocked by the lack of means, and therefore, initiatives do not take place. In this sense, a centralized platform based on an advanced network between all parties: government, private sector and civil society could increase massively the innovation level in Denmark. It would also improve the connection standards with the civil society.

The last area of focus that the OECD report discussed about, was about the lack of models and methodologies used to measure and evaluate the achievements and benefits of e-government projects. It indicates that in order to achieve full benefits from e-government, the government should consider broader perspectives for its electronic services. One of the risks, Denmark is facing, is that large ICT programs miss on a comprehensive view of the core competences and skills needed for the future support of the public sector reform objectives. This consequently has a negative impact on the implementation and delivery of e-government services. The government is also not fully exploiting the digital opportunities. There is a slow flow of public sector information across the different levels of the government, and a lack of clarity on who is the primary holder of the core data and on how it can be accessed or reused by the different parties (OECD, 2010).

As previously, the confusions and failures at the governmental level, are affecting also the operation of public private partnerships. This is reflected in the interviews' answers. The respondents mentioned about the lack of a learning process across the country and the repetition of similar mistakes because the information is not passed further or exchanged in an organised way. *"there is no learning on the success and failure (...) small communities start their own innovation projects without consulting the other communities, in order to see if there are any similar projects and whether they can cooperate on the projects" (Appendix 2). Also, at the question regarding the characteristics of a potential platform, several interviewees pointed that it should be in charge of the recruitment process, because of the high importance of having the right set of skills in the key positions in order to ensure progress and efficiency. <i>"the main task is to recruit some people who are competent"* (Appendix 1); *"the nature of personnel recruitment"* (Appendix 5).

The set of proposals constructed by the OECD include improving information and data management, through the adoption of a policy covering public information management. It also suggests to better ensure the full exploitation of the e-government projects. These amendments, if implemented, could improve the whole public-private partnerships' process from its cores and, as well, bring the current research question closer to a positive answer. Developing the capacities and the competences of the government's digital services could benefit PPPs by ensuring an easy, well-managed process for their initiation and future development. This would also reduce costs and create a better operational control. In the same time, an improvement in the data and information usage and regulation, would improve the export of the knowledge and reduce the frequency of the committed errors. Figure 9 summarizes the points discussed previously.

Could E-Governance become an implementation platform for Public-Private Partnerships?



Figure 9: Summary of the areas of focus and suggested improvements by the OECD, and their effect on the PPP sector

The interview process revealed a monotony in the respondents' answers regarding the potential expansion areas for PPPs. Moreover, they have only discussed the current situation and challenges in the context of the conventional large infrastructure schemes. This is partly due to the previously discussed challenges, and, also, due to the short history of PPPs in Denmark, all projects being traditionally related to infrastructure.

Specialists tend to forget that PPPs have such a broad perspective and can be used in very different and very innovative ways. Since the research question involves a completely new overview on both e-governance and PPP subjects, it is important, firstly, to analyse the partnerships that registered progress in alternative ideas. Therefore, the analysis will further focus on the project Gate 21

Gate 21 involves partnerships with municipalities, regions and businesses for developing resource-efficient solutions and promote a green transition for Copenhagen city area. (Gate 21, 2016) The following information was collected from the Gate 21 web page.

The activities the project is undertaking are very complex and time consuming because the organization is not only trying to find new green solution for such areas as transport and building new parts of the city, but also developing a Smart City Agenda and finding new energy solution, which are fossil-free. Moreover, their work goes as far as ensuring job creation, strengthening sustainable planning across sectors and create cooperation between knowledge and research institutions, private sector and municipalities. Therefore, even if unofficially, Gate 21can be named as an innovative public private partnership.

These projects require an enormous amount of work and support from the government. Some of the time-frames go up to 30 years or more. Their visions call for shaping new strategies for urban, residential and commercial development with improvements in frameworks and legislation. The Gate 21's vision and mission are so wide that it implies the local government to become an active player, to be involved in the planning process and the development of innovative public procurement processes.

It has to be mentioned that the organization is expecting the future solutions to be centered on the support of new forms of cooperation. Furthermore, it requires the creation of a common platform for developing and exchanging knowledge across the regions (Gate 21, 2016).

All the activities, challenges and future intentions go hand in hand with the purpose of the current research. Gate 21 provides the study with an example of successful implementation of public private partnerships' tools for the creation of innovative and sustainable solution for a community. Its future incentives of creating a common platform, confirm once again its importance for successful collaborations. Gate 21 also shows a new perspective for PPP solutions. Sustainable ideas in consortium with PPP frameworks can increase the partnerships' usage and create more results. It would also raise public awareness about PPPs and decrease the skepticism.

If Gate 21 would be able to develop the platform, as they are aiming to do in order to form the backbone of their Smart City initiative, it would bring a lot of new information to the table. It would be the first platform in Denmark to involve a partnership between the 3 sectors: public, private and government, so it would have a great impact on the future possibilities of public-private partnerships. A future research would also get a lot more insightful, having data based on a real-case platform.

4.4. E-Governance in PPPs: A New Model

The above analysis provides a number of interesting points on the current situation of PPPs and their challenges in Denmark. In the same time, it displays useful information for a more insightful research. Therefore, the next chapter will address the possibility of creating a new model of analysis for potential PPP platforms.

The Literature review together with the detailed coding process of the interviews, the OECD improvement points and the case of Gate 21 project create a base of characteristics that can be used for the development of a new analysis model for a potential PPP platform. The new model will include 4 main areas of study that established certain specifications and conditions for a possible development platform and which together create the cluster of expertise needed (Figure 10).

The first part, **Interviews' Suggestions**, includes the set of suggestions gathered from the interviews' coding process. It uses the respondents' answers regarding the question about potential characteristics for a PPP platform.

The second part, **The OECD Areas of Focus**, show the main conclusions derived from the OECD report, analyzed and discussed previously. It includes the improvement points for the electronic governmental services, which in turn would affect the efficiency of the PPPs. It also shows the potential benefits the partnerships could have if using e-governance as a platform.

The third part, **Gate 21 Example**, uses the example of the project Gate 21 in order to build the requirements for successful ideas. An efficient platform would not only be in charge of the implementation process of the PPPs but also of their selection. Denmark's government and civil society have proved to be doubtful in relation to the partnership, thus, the platform would have to choose the projects which do not only meet the set of conditions but also have the highest chances to be supported by the community. Moreover, offering the possibility of assistance and job creation will have a certain positive effect.

The last part, **GRC Requirements**, includes the specifications discussed previously regarding the GRC field. The literature review argued that GRC is a critical part of any effective partnership, therefore, when discussing about a potential platform for PPPs, GRC practices should be present. It is pivotal to have the risk allocated to the right party, to have a transparent environment and eliminate the bias, and respect the set of requirements and regulations.

Interviews' Suggestions	The OECD Areas of Focus		
	 Focus on government processes rather than on e-government as an individual policy area Embrace a broader vision of e-government Improve collaborations through concrete activities and projects Strenghten the sub-national level by creating joint-solutions Prioritize end-users' needs Improve information and data management by adopting a new policy covering public information management Ensure a full exploitation of e-government projects 		
Gate 21 Example	GRC Requirements		
 Implement innovational PPP projects Aim for sustainable activities that will get a rapid approvement and trust from the civil society's side Cooperate with knowledge centers, municipalities, businesses and the civil society Ensure assistance to similar projects Secure job creation 	 Allocate risk to the party in the best position to manage it Establish a transparent environment with an active implication of stakeholders Secure projects' quality Eliminate bias Ensure the fulfillment of the rules and regulations 		

Figure 10: A new model for E-Governance in PPPs

Finally, the new model (Figure 10), can be applied to the research question and observe if E-Governance practices fulfill the obtained requirements. Table 3 discusses the applicable set of requirements in relation to E-Governance services.

Model	Requirements	
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E-Governance' Fulfillment

Reduce Costs	The development costs of potential projects could be reduced considerably because of the progress and the digital possibilities e-governance services can provide.
Recruit competent personnel	The recruitment process could be organized through the online channels, thus enhancing transparency
Create the right set of models and frameworks	The creation and distribution of the necessary models and frameworks would be easily accomplished through the current means
Ensure a pipeline activity of the projects	The well-developed e-governance services could ensure the communication between the municipalities, and thus create a pipeline of projects
Drive innovation	The governmental services are scrutinized more often therefore they often subject to updates and innovation
Enhance connectivity between the public and the private sector	E-governance services have already a very wide coverage in Denmark, the country being in the top charts of the world
Decrease bureaucracy	One of the main purposes of the service is to reduce bureaucracy, which has been accomplished successfully so far
Prioritize the end-users' needs	As the previous point, prioritizing the end-users is through the main objectives of e-governance
Risk allocation to the right party	The e-governance digital services that could ensure the display of the aspects of both parties, would facilitate the process of risk allocation to the right party.
Establish a transparent environment	Having the services displayed openly for the community, with an easy access would definitely provide a transparent environment
Secure projects' quality	The open access to the services' status would give an incentive to the parties to provide a high quality performance
Eliminate bias	As mentioned previously, having the services openly displayed for the society, would eliminate bias and create transparency

 Table 3: E-Governance services analyzed against the new model

The analysis of the E-governance services has proved that the digital model could become a solution for the PPPs in Denmark. Its implementation could be facilitated by the already existing advanced digital system and by the high number of users who have an access to it. These advantages would also guarantee a high quality of the projects, transparency and bias elimination. Moreover, being a governmental service, it would be checked and updated more often, thus ensuring the high innovation standards. The digital platform would also be able to spread easily the frameworks and any of their eventual changes. Its high development level would secure connectivity between all the parties thus permitting the creation of pipeline projects.

The conducted analysis has assisted to the creation of a new analysis model for a potential PPP platform in Denmark. It has also discussed the possibility of using E-Governance as a solution, like the research question is inquiring. The test showed that the digital service has the potential to meet all the requirements of the new model created thus giving a positive answer to our main question: "Could e-governance become a development platform for public-private partnerships?"

4.4.1. Model Limitations

The new model includes also a set of limitations.

Firstly, it is based on the information gathered from a limited number of interviews. Therefore, the data risks to be biased or inconsistent at times.

Secondly, it refers to two cases: the OECD report and the project Gate 21. The information form the OECD report can be outdated at times because it has been created a couple of years ago, therefore the implications can be already realized. Moreover, Gate 21 is not officially declared as a PPP project. It has been used because it fulfills the demands of a traditional PPP, however for better outcomes, a future research should introduce data from a PPP activity.

The test on E-governance has also some limitations. It did not include the full set of requirements as presented in the model, because some points are not applicable. The data related to Gate 21 cannot be tested unless E-Governance does become a platform for PPPs. Moreover, the majority of the specifications about its performance and the concluded results can only be implied, based on the existing literature.

5. Conclusion

The research started with a very well-defined question: "Could E-governance become a development platform for Public-Private Partnerships?" The preliminary analysis of the exiting literature and of the overall situation in Denmark, showed that there was a critical need for an organized and centralized change in the activity of the public-private partnerships. This was confirmed also by the limited number of projects realized over the last years, even though the country has the right set of skills and the multiple areas demanding specialized attention. Considering these facts, it was clear that there is a big gap in the partnerships' development, mainly due to the lack of a centralized platform, controlled top-to-bottom, with well-constructed frameworks and a legislation to be related to. Since the country's governmental digital services are established in the top lists for performance, the idea of using them as a potential PPP platform appeared.

To do so, the research started with a wide literature review on both topics. This gave a good base of knowledge on each case individually, however, it also pointed on the limited studies in what concerns the possibility of combining the fields in a joint venture. The performed literature review includes as well the very important topic of GRC, which is critical for the successful operation any partnership. Moreover, because there are no real life models of governments using e-governance services for developing PPPs, the study had to rely on the data gathered through semi-structured interviews from several Danish specialists in the PPP domain.

The interviews had the purpose to reveal the current situation on PPPs in Denmark and specify the challenges they have to overpass. They also questioned the need for a development platform, and what would have to be its characteristic in order to make accessible PPPs performance. Therefore, the data was coded in terms of the most important concerns for the research study. The 8 major nodes, 4 out of which were further expanded in subcategories, were then analyzed in relation to existing literature. They were also analyzed in connection to the OECD report on E-Government practices in Denmark discussing strategies for enforcing the practices, and in connection to the project Gate 21, which used the partnerships in an innovative way.

The OECD Report was used because of its pivotal suggestions regarding improvements for the digital governmental services, which if implemented, would also improve the e-governance performance and in turn the partnerships' efficiency. In the same time, the case of Gate 21 was used because of its innovational view on using public-private partnerships. The project intends, as well, to create a platform for its development. This idea could change the rules of the game in the sphere of PPP in Denmark.

After evaluating the data across the two scopes, a new model was created. The model includes a set of requirements that a potential PPP platform should fulfill in order to achieve the desired success. Therefore, it combines the specifications mentioned by the interviewees, the set of improvements proposed by the OECD, the Gate 21's strong set of characteristics, a potential platform should choose, and the GRC specifications.

Finally, the research question was tested against the new model and the research got a positive result.

It should be mentioned that the set of requirements from the new model created could be used in very flexible ways. They do not have the intention to build boundaries, rather they set a wide range of possibilities for the PPPs. A potential platform could choose one of the stages and specialize or it could expand and deliver services that fulfill the whole set. The model states as well a set of requirements for potential projects, therefore it can be used also as a key factor when analyzing the potential of public-private partnerships.

It is important to understand that Public-Private Partnerships and E-Governance are two very sophisticated and very complex tools. Their activity relies on the professional engagement of many organizations, therefore, the incentive of combining the two in order to create innovation and progress is a very courageous move. Several interviewees mentioned the risks that could come together with the initiatives and they specified the attention that would have to be given to the creation of the platform, so it doesn't become an overly complicated burden for the system. However, in the same time, it wasn't hard to notice their concerns related to the lack of a platform and their enthusiasm at the idea of using an already established system, such as E-Governance, in order to deal with the problem.

It is very difficult to analyze a topic that is so "raw" because it rises many questions and dilemmas. The lack of previous attempts and a scarce literature on the topic makes it even harder, that is why, we regard it as a necessity for further investigations to take place. At this point, the study proves the critical necessity of a platform, which should be controlled by the government and have a well-established set of rules and frameworks attached, in order to reduce confusion and increase the usage of public-private partnerships in Denmark. As stated previously, the Danish government has the right set of skills to do so, thus it should become and active player and take more initiatives. The electronic services it provides are remarkably advanced so they could become a major facilitator in the current situation.


Through the research process there were encountered a number of limitations that are going to be further reviewed.

The biggest limitation was related to the lack of theories and methodologies in the field. The inability of relating to a real-case scenario created difficulties in gathering and analyzing the data from the interviews. Moreover, it generated complications in regard to the differentiation of the biased information, through the respondents' answers.

The lack of literature on E-Governance practices has also created limitations for the study. The existing reports focus mostly on e-government digital institution rather than on e-governance services, therefore, the current analysis is based mostly on information regarding e-government.

Another limitation concerns the number of the interviews. The initial goal was to get a larger number of interviews with people from several organizations related to the PPP sector, however, it proved to be fairly difficult to do so. Many potential respondents refused to answer, because they felt they do not possess the right knowledge, implying that their answer would not be relevant. That was despite the fact that their names were in the Board of Advisers of the CBS PPP Platform. Moreover, the interviewees were part of organizations very different from each other, with different backgrounds and collection of knowledge. Even if, it brought a very large perspective on the topic, even with a smaller number of interviews, it has not been possible to build data on similarities and dissimilarities across related industries.

The third limitation involves the analysis of the data with the NVivo software. Despite the vast possibilities the program can offer for coding and evaluating data, the options are only limited to the Windows Operating System. Therefore, it was only possible to codify the information and create the visual maps.

It is very desirable a further research on the topic, organized with the implication of more specialists from both the PPP and E-Governance sectors. One of the suggestions would concern the number of interviews. For a wider prospect, a large number of interviews with more detailed questions should be realized. It would, also, be highly appreciated the opinion of the government, both central and local, in order to get a perspective also from their point of view.

Finally, it would be helpful to analyze the data either using another software or on a Windows Operating System. It is very important to create more options for the empirical study.

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APPENDICES

Appendix 1 – Interview transcript with Carsten Greve

1. Presentation (name, profession, how are you related to PPP platform)

So, my name is Carsten Greve, and I'm academic staff here at CBS, I'm also doing some research on, mainly infrastructure PPP, but also other form of PPP, from organizational and policy perspective.

2. Do you think the Danish PPP sector is facing any kind of challenges?

Yes...Yes and no. I think they are facing some sort of challenges mainly to do with the policy recommendations for PPPs, so, it needs to be a pipeline of projects... it needs to be several projects in a row, so that it can actually be a market of PPPs. I think, it is not so much crisis, is because now we have a lot of materials on institutional frameworks on PPP recommendations and so on. So there is actually quite a lot of knowledge now, both in research but also through think tanks in international organizations.

3. As a professional in the domain, which areas, would you suggest, PPP should cover in the future?

Well I think, the main thing is to look at them as a life cost perspective and also see them in a moralistic sense. We have to take all the life-cycle into account: the formulation of the project, the actual decision and then the actual building of the project, the maintenance and so on. So I think it is important to keep the life cycle perspective on these projects, so we would talk about large infrastructure projects.

4. Do you feel that PPP has enough coverage in the Danish society?

In the Danish society, no. I think that our man, are sometimes lacking up, to say so. They are saying that there should be more activity, but they do not reflect it in the government proclamations, so they are not following up a lot of the policies. However, on the ground, there are a lot of governments in Denmark that start to use PPP, like for example for schools or other different kinds of projects, in the local community and also in the regional community, also the healthcare sector is using PPP. So, there is a little bit of discrepancy in the governmental policies and the actual activity on the ground.

5. Do you believe it would help having a centralized, well-structured governmental platform?

Yes, I do. And also if you look at other countries, they all have governmental centralized platforms, for example in Canada, or they have them in some states in the US, or for France and other countries. So, it is definitely a way Denmark could learn from. Also the international organizations, they also recommend to be a central platform, governmental platform for PPP.

6. What characteristics should the development platform possess, in your opinion?

I think the platform can be structured in different ways, but I think the main task is to recruit some people who are competent. And, so it means that you would have an organization that would recruit the right kind of talent, with the right kind of professional competences. That means that probably it will be needed sometimes to go beyond the public sector, and it should be really decided who to be hired and how should they be organized in order to be efficient.

7. Are you familiar with the concepts of E-Government/ E-Governance?

Yes.

8. How do you feel about the possibility of using E-Governance as a development platform in order to expand the PPP sector?

There are several ways that you could imagine about how it can be used. The first one is to have better project management, that means e-government could support the management with more e-government tools. Another point I would make is that, there is actually some work in the European PPP Centre, where they focus on having an exchange platform for projects' ideas, where they would discuss which projects would be put forward and which countries would be interested in certain projects, and so on, so I think that could be covered and lead by an e-government platform. I think it would be possible, at least desirable.

Appendix 2 – Interview transcript with Christian Bason

1. Presentation (name, profession, how are you related to PPP)

My background is in political science, and I've worked for almost 10 years in management consulting for the government, and then then I was head of something called MINDLAB, a Danish government's agency, and in particular at MINLAB I begun to have conversations with Carsten Greve who was at CBS and is one of the leaders of the PPP platform, and also Paul du Gay, and others... and Carsten Greve became an advisor in my advisory board at MINDLAB, and later on I became a member of the advisory board of PPP at CBS. And you can say that my presence was in the public sector before, and with innovation in the public sector. But also I worked extensively as a consultant on issues around PPP, and outsourcing and public procurement.

9. Do you think the Danish PPP sector is facing any kind of challenges?

So I think the Danish PPP area, but also globally, at least in the OECD countries, there has been in the last decade some recognition, and maybe the promise that the new public management, PPP and outsourcing in various ways would deliver both a higher quality but also lower costs. That promise has been a bit challenged. And, I would say, that today we are at that point when there is no big picture that it is a good idea to simply use public service contracts and allow private firms in the market to pay for. There is a lot of scepticism and confusion around when and where makes sense to have services from the private sector. This is a major question on the future governance, so I find it smarter to find different ways and better ways the following the path of the PPP.

3. As a professional in the domain, which areas, would you suggest, PPP should cover in the future?

Well, I think there is no doubt, when it comes to areas where the private sector simply has a critical mass of skills and the types of problems are just complicated, such as infrastructure, building bridges, roads, it could be some simple it services then I think it makes sense. I also think that in the countries where there's been allowed to non for profits and for profits to build schools and hospitals, for example, then there is no need to change that, but I would say that in a country like Denmark where governmental organizations have been responsible for most of the more complex public innovation, it does not make sense from my perspective and from the evaluation analysis I work with, to put it on simple contracts and then outsource it to a market that doesn't exist; and there is absolutely no evidence that it would provide better quality or that it provides savings , on the contrary we've

seen a major political risk, and problems, and media challenges. And many actors are hoping for Denmark would be this avenue or arena for testing out new forms of private relations with public services, but it is really not been successful.

4. Do you feel that PPP has enough coverage in the society?

That's a good question, [...] in particular in Denmark, I am not following so closely anymore but I would say that Denmark being such a small country and with a highly developed infrastructure, there has always been questions on how do you create joined up services and joined up infrastructure. But I would say that Denmark and the Danish government, I often less ambitious and less radical than in countries like the UK or even maybe like Sweden or like the US, which means that it is probably going to be a mix still, where a lot of services are run by the government but there is also major source that is outsources, and there is not enough recognition of how important it is for public organisations themselves to be familiar with the it and digital development especially when it comes to citizen related services. So, there is a way to go, and make it publicly accessible. I think there is a lot of work to be done, also on understanding the unique role it has for the government, the contribution. That sharpness and that precision is still lacking in the Danish landscape. Also the change in governments, and the right wing government would probably put more emphasis than the left wing government.

5. Do you believe it would help having a centralized, well-structured governmental platform?

Yes, well I think, it is a little bit connected to what I said before. It is a good question...I do not necessarily like the word centralized but I would say if you build an environment, an unit that teams and goes inside the organisations or highly intelligent and aware of where public services can really grow and where show obstacles, and under which conditions it does make sense and its more inductive to make PPP and which are the unique ways to doing that, then it would probably help the rest of the public system to do so. And I would say that often these things end up in sort of very simple ideas about where you can buy cheaper, purchase in volumes, keep services or keep products, rather than a sophisticated, intelligent way of doing these partnerships. Which should also be taken into account, because the role of the government is not only to be cheap or feasible but also to create long term outcomes. And it is also the role of the government to innovate, and in order to innovate and create new solutions and better approaches to problems, government staff needs good tools, good technology... and the role of partnerships would be to connect them to that. And later, obviously to

be aware when those solutions should be delivered, when solutions could be innovated and created... you can also say that before even talking about PPP as in an operational model, first we should talk about PPP in an innovational model... how do we even connect with the private sector?

6. What characteristics should the development platform possess, in your opinion?

(he expanded in the previous question)

7. Are you familiar with the concept of E-Government/ E-Governance?

Yes, very much.

8. How do you feel about the possibility of using E-Governance as a development platform in order to expand the PPP sector?

I think that it has to be mentioned that any innovation in the public service takes place in a world highly digital and not highly mobile. You have to understand that 80% of the population probably has digital access. So this could be the key. Also, I would have to say that one of the unique questions or roles that the government needs to understand is that in a digital age or from a e-government perspective, what is there the unique division of tasks or what are the relationships between public and private. There has been a recognition that because of the digital, the e-government is such a core and critical part...where you can find very interesting new ways...where the government can build new infrastructures, standards, platforms, and arenas, where then private actors can play their role and citizens can play their role.

Appendix 3 – Interview transcript with Mads Eriksen

1. Presentation (name, profession, how are you related to PPP)

I'm Mads Eriksen, and I'm an advisor at Corporation of Professionals in Denmark and I work with PPP as a lobbyist – involving how to frame the cooperation between the public and the private sector in a manner that suits the members of our organization.

2. Do you think the Danish PPP sector is facing any kind of challenges?

I think in our opinion the main challenge is the lack of cooperation, as lots of exciting projects run but there is no learning on the success and failure. They can make a failure in one part the country and next day in another. They won't learn from mistakes. Our main interest in PP innovation is that we see a lot of small communities start their own innovation projects without consulting the other communities, in order to see if there are any similar projects and whether they can cooperate on the projects. So the main challenge is the lack of cooperation.

3. As a professional in the domain, which areas, would you suggest, PPP should cover in the future?

We think there is a lot of stability in PPP and innovation etc. I guess you cannot point to a part of the public sector where it would not be relevant. It depends on how you do it. We are not pleased to see for instance the schools that they were prioritized as they were in Sweden as there have been a lot of problems there, but there is a lot of things in the school systems where it could be a fruitful cooperation regarding developing new it systems, etc. I think there is no sector where we can say: here the private sector is not welcome, its more how it is done. We have seen a lot of problems in the elders' sector where companies have gone bankrupt. So, there is a lot of possibilities for cooperation in innovation projects.

4. Do you feel that PPP has enough coverage in the Danish society?

We see a lot of possibilities in PPP, so in that sense the answer is no. But, do we want to push forward more so that the private companies take over what is private now, then the answer is yes. I think it is more a yes. We see a lot of places where private and public sector could have a fruitful cooperation.

10. Do you believe it would help having a centralized, well-structured governmental platform?

Well, we are definitely for it. Actually one of my main policy areas is to push forward a centralized governmental platform. It is essential to have better cooperation. Not only between sectors, but also knowledge cooperation across the country. So that the good cases could be spread and we only want to make the failures ones. So we think it is essential to get a governmental structured platform. To rise the knowledge base and secure that this type of cooperation gets up to a higher level.

11. What characteristics should the development platform possess, in your opinion?

I think there are 4 subjects that are essential to this platform. One, is that we have better prioritization. Because, we have had some bad cases and we should learn from the bad cases and use this tool when it makes better products for the public sector. Second, PP innovation, to see where it could be a fruitful cooperation between public and private sector. Especially in the health sector there are a lot of possibilities to make a cooperation and invest in technology and develop new products. Third, PPP. It is very difficult to make these contracts, when you make a PPP, so the projects have to be very very large to succeed. So, in our opinion we need to make a pipeline for projects, For example, when you build a school then you could actually build ten schools around the country. All of the ten schools could have the same contract and this could make it cheaper for the public sector and make it more attractive for the private one. And the last is export. If we could have a bigger export of knowledge and technology, so we could export products and good solutions.

12. Are you familiar with the concepts of E-Government/ E-Governance?

Not really. I'm not sure. [explained briefly what is e-governance]

13. How do you feel about the possibility of using E-Governance as a development platform in order to expand the PPP sector?

I think if you look at our idea with a national pipeline then you could pull the idea of egovernance There could be a possibility to join forces in the national platforms. So in that sense I think there are a lot of possibilities for pushing forward. Because this is one of the areas where they could really make better productivity in the public sector. There a lot of control mechanisms in the public sector, so you could use it to drive less bureaucracy. So I see a lot of possibilities in using egovernance to develop the public sector.

Appendix 4 – Interview transcript with Niels Ejersbo

1. Presentation (name, profession, how are you related to PPP)

My name is Niels Ejersbo. I am the senior researcher at the KORA, the Danish institute for local government research... And KORA is related ... or part of the PPP platform. I worked here at KORA since fall of 2015. I am doing research for the local government, but I also, earlier in 2015, together with Carsten Greve from CBS PPP platform, we had more general PPP projects.

14. 2. Do you think the Danish PPP sector is facing any kind of challenges?

Well I think I saw that the first PPP project was in 2005, so I think more a challenge is that we do not have very much experience with PPP. IT could be maybe 14 projects altogether, in Denmark from 2005... Our experience, our knowledge, also the long term effects are very limited. So that is very challenging...The knowledge we have about PPP is mostly from international projects or projects on other countries. So, that I would say is one of the problems – we do not have experience. This is also why the government and the local governments are somehow hesitant is setting up PPP projects, since they do not know how it will work in the long run.

Also, there have been a number of Government reports, and one of the recent reports said that it is actually difficult to say when PPPs would get economically effective. In terms of the size of the project, the finance, how you split the risk, also how the market is functioning now, how competitive it is and how much competition is there on the market... So... we really do not know... and that government report shows that it is difficult to say when and how PPP projects will bring economic benefits.

3. As a professional in the domain, which areas, would you suggest, PPP should cover in the future?

I think it is a very good question. Because it is difficult to say something, especially which areas should be covered. It all depends on the how is the market situation, the financing, where is the need for developing new solutions, so it really depends which area and in terms where should we better use it... we should use it more for schools, or for hospitals...as you may know in Denmark in the last 10 years there were built a number of new hospitals... that you could say... that could be an area where they should actually look into using PPPs... but, before coming with that suggestion, you should make an analysis, on how Is the competition in that area, how would they divide the risks etc.

so, I think it is a very good question, but it is also very hard to answer, because it would depend on X project. It is difficult to say...

But do you think there is a need for PPP?

I think they should make an analysis and try to work whether is a good idea. But it is not a solution that should be used just because it is there...In some instances it might be a good idea and in other instances it would be less good. I do not have an opinion about whether we should expand using PPPs or we should use less PPPs. I think PPPs is in a tool box and its worth looking into, make an analysis, see how it works, it is solutions, and if it is a feasible solution we should go ahead. But it requires to actually make an analysis.

4. Do you feel that PPP has enough coverage in the Danish society?

If you think about it as a political discussion, then yes...Yes it should be more discussed, from the democratic consequences of using PPP, and it should be more covered...I think.

5. Do you believe it would help having a centralized, well-structured governmental platform?

Yes. I think definitely... if the aim is to make more use of PPPs, then that will definitely will be a solution to do that. If you have more political focus, and also if you the central government puts more emphasis on it, use more resources to make a general platform, then yes I think...I'm sure it would expand the use of PPPs in Denmark.

So it would be better from up to bottom the incentive?

It is not that they should demand from the local government wherever it should be used it, but it is needed more information on how it works, more information about what are the difficulties, problems of using the PPPs. They should look into that and evaluate whether there are problems related. I do not think it should be a demand. [...]

6. What characteristics should the development platform possess, in your opinion?

At least, you know, first, it should be looked in the parts of legislation about the use of PPP, then it could present different models of sharing, development, or make analysis about how the market is developing in certain areas, so it should be easier for local governments to actually initiate PPP projects. One question is that it is actually very costly to set up PPPs, and the platform could maybe reduce these development costs.

7. Are you familiar with the concepts of E-Government/ E-Governance?

Yes. I know about that. It is not something I've done research on, but I'm familiar with the concept.

8. How do you feel about the possibility of using E-Governance as a development platform in order to expand the PPP sector?

There could maybe some E-Governance solution that could help the development of PPP, but I'm actually thinking in terms of E-governance more as delivering services. I would say, it would depend on how it is set up, and what problems it would have to solve. I have difficulties to say whether it would be a good idea.

Appendix 5 – Interview transcript with Paul du Gay

1. Presentation (name, profession, how are you related to PPP platform)

I am a professor in the Department of Organization at CBS and also at Royal Holloway University of London. I'm by training a sociologist and I work predominantly in the areas of organisation, sociology and economical organisation in the public administration and ethics. And my real connection with PPP, is through being one of the academic directors of PPP platform at CBS, which is designed to engage more widely with very different stakeholders, in terms of exploring and analysing the possibility to increase PP collaborations.

2. Do you think the Danish PPP sector is facing any kind of challenges?

That's a good question. I do not have the right attributes to answer to that question, very clearly, because I do not explore what's going on in the Danish PPP sector as much as my academic colleague Carsten Greve, who is the other academic director of the CBS PPP platform. I tend to be involved in other areas of research and engagement. [...] In terms of technical, legal and other dimensions, there is a set of issues which I know, are concerned widely on how to expand the development of PPPs in the context of EU roles and so on. In terms of the specific political potential pitfalls...coming from my own context in the UK, one of the 4 reasons why PPPs or PPIs, there has been considerable concern about the extent to which, although there is a set of assumptions that increasing the number of these partnerships, means that the risk is delegated to the correct partner, the society made us realize that actually you solve major challenges by bringing together different sectors and so on. In the UK, the extent to which public sector has been left to carry the burden, especially aftermath of the financial crisis, when a number of PPPs collapsed with considerable debts on the public accounts, has obviously caused some concerns around on how exactly how these contracts are developed and where the risk is actually allocated. Because, at the end of the day, the risk ends up being again with the public sector. What exactly was the benefit of obtaining PPPs, in the first place. I think the political logic, is to increase PPPs and there are positives and negatives to that. The positives are that its absolutely essential to trace, as a collective, the problems that we face, and that there are clear boundaries between the public and private, whether it is climate change, the need to adapt to major issues, in terms of aging and health and so on. All of these suggest the need to be the PPP to deal with them. On the other hand, the nature of the enterprise and the nature of the contracts, although the public sector has become much more expert in how to expertise and mange contracts, nonetheless, my concerns still lies with the fact that the risk is delegated correctly.

3. As a professional in the domain, which areas, would you suggest, PPP should cover in the future?

(chose not to ask since it was stated before the subject of the interview is not informed enough)

4. Do you feel that PPP has enough coverage in the Danish society?

(chose not to ask since it was stated before the subject of the interview is not informed enough)

5. Do you believe it would help having a centralized, well-structured governmental platform?

I think undoubtedly it will be the case. I mean although there clearly has been central governmental authority given to units to develop a policy of increasing PPP, the greater the degree of centralization and authority, will definitely be of use, and obviously be able to allocate that practise more widely I think. So, I would say yes, that definitely is something that should be developed.

6. What characteristics should the development platform possess, in your opinion?

It is very much the case that you do not want to be in a situation where the nature of personnel recruitment leads to a situation where you effectively do not have long term capability and capacity to continually be clever in terms of how you divide your contract, how you monitor an effect, whether or not value and quality is being maintained. So many of the public management changes that we've seen in the last 30 years, which obviously include the PPPs,

7. Are you familiar with the concepts of E-Government/ E-Governance?

I'm familiar with the concept and some of the literature.

8. How do you feel about the possibility of using E-Governance as a development platform in order to expand the PPP sector?

In terms of speed response, information flow, of course it is one potential up front benefit. But, I'm also concerned about increasing complexity, and also decreasing the level of personnel and expertise. It is extremely difficult when one is looking at such remarkable kind of social and critical changes... To know what is going to be the stabilizing and ordering dimensions here. So, whilst I'm very for public sector innovation and so on, they have to be in a context and parameters of something that still maintains political order, parliamentary accountability and so on. So, I guess, from my perspective as a student of bureaucratic public administration, I'm very concerned that the overall capacity of the system to deliver, to maintain capacities, for not being too much complexity, too much diversity, or too much strain on the system. I'm very concerned both in terms of management techniques, but also in terms of the liberation of disruptive technologies, not that I do not think they have a place, of course I do. You should not have expensive government, when you can have less expensive government...But I bulk at conversations with a large numbers of folks in the realm of public sector government and public sector innovation, we talk a lot about large ideals and remarkable break-troughs, without thinking about the consequences on the existing systems of government that we have, and whether or not that could be considerably undermined or in some way damaged by the development, because it is fragile, unless though through very very carefully, and somehow emended within or attached to the existing processes and procedures without causing too much disruption.

Appendix 6 – Interview transcript with Robert Hinnerskov

1. Presentation (name, profession, how are you related to PPP platform)

I am the General Secretary at the Danish Fund-racing Association, which is an umbrella organisation for 170 charities, NGOs, in Denmark. And I'm working on behalf of the organisations with legislation about taxation, value agree tax, CSR, fund racing events and also with matters in relation to the European Commission. So, I'm head of this organisation, as General Secretary, and as such, I am a kind of lobbyist on behalf of these organisations, as well as for the Danish government and for the commission. And, my perspective in PPP or PP platform – the civil society. I am looking at the partnership potential in the civil society, between organisations in civil society and, for instance, the municipal level partnership among civil society organisations, NGOs, businesses in Denmark and so on.

2. Do you think the Danish PPP sector is facing any kind of challenges?

Yes, I definitely think. I think that actually the NGOs are facing some challenges, because they should perhaps work more intensive to get and to enhance partnerships with, for instance, the municipalities in Denmark. Just to mention, the refugee crisis we have, I think many municipal actors are facing a lot of local challenges, and I think they could actually work more systematically together with the charities and NGOs at the local level. We have seen that people in civil society make autonomous organizations, which might be good, but I think that charities, should perhaps also look at these changes and handle these problems, together with businesses and municipal authorities.

3. As a professional in the domain, which areas, would you suggest, PPP should cover in the future?

I think that PPP is a wonderful platform for discussion for partnership changes, but I also think that they should focus more on the society and its challenges.

I think perhaps a framework about partnerships, what specific challenges do NGOs face when they make a partnership with the businesses or municipal authorities, how could we perhaps develop models for partnerships, how could we develop models that could also "house" all the voluntary people that we have in the society. It is not every one in Denmark that wishes to become a member of an organization, but wishes to do something voluntarily. So, it could be new ways of organizing civil society. It might be interesting for PPPs to work with such models, or at least make some research in this area. We actually do not have that much research in Denmark in civil society and among voluntary people. I think we should focus more on the society.

4. Do you feel that PPP has enough coverage in the Danish society?

It is hard to say. I think you could always do more; you could always focus more on this. I think one of the challenges that we are facing in Denmark now, is that we should not just look at national partnerships. I think, at least the businesses know that we actually live in Europe more than we live in Denmark. I think, we should perhaps look at the European level, at least, so that it is not just a Danish phenomenon we are talking about. So, I think we should broaden the PPP perspective, and also come to an international and cross-border perspective.

5. Do you believe it would help having a centralized, well-structured governmental platform?

Yes, if it has an international outlook. I think it depends on that. We have far too much looking at Denmark and what's happening within the Danish borders. I think it is a major failure in the modern society, that we more and more perhaps close the borders around ourselves. I think such a platform should have a European outlook.

6. What characteristics should the development platform possess, in your opinion?

I think it should be structured with members from the municipal level and of course government, the industries, businesses and the organizations from the civil society. So to speak, the 3 sectors that should be represented. But I will not have a more finished model on how we include I think it is very fine we have international researchers visiting Denmark, but I think at the level of organizing something we should have a European perspective.

7. Are you familiar with the concepts of E-Government/ E-Governance?

Yes. We talk about it at all levels also in the civil society organizations.

8. How do you feel about the possibility of using E-Governance as a development platform in order to expand the PPP sector?

Yes, I'm sure we could combine them. But I think it depends, if you want to combine something and you have a broader perspective, then you have to be more careful about the strategy, so it doesn't become a platform about everything. So, I think we have a pile of challenges, when we

combine these things, to sharpen the focus on a specific strategy. I know it may seem a little too theoretical, but it is the price we have to pay for broadening our perspectives.

Name	Sources	References	Created On	Created By	Modified On
View on E- governance in PPPs	6	11	17 May 2016 13:15:41	IB	19 May 2016 15:02:28
Potential Platform's Characteristics	6	19	17 May 2016 15:08:27	IB	18 May 2016 14:54:20
Reduce costs	2	2	18 May 2016 15:01:31	IB	18 May 2016 15:10:26
Recruitment	2	3	18 May 2016 14:54:43	IB	18 May 2016 15:07:11
Pipeline	2	2	18 May 2016 14:59:21	IB	18 May 2016 15:11:07
Models and Frameworks	2	3	18 May 2016 14:55:26	IB	18 May 2016 15:08:31
Innovation	2	2	18 May 2016 15:06:05	IB	18 May 2016 15:06:37
Connection	2	3	18 May 2016 14:59:48	IB	18 May 2016 15:09:43
Potential Challenges	2	4	17 May 2016 23:08:36	IB	18 May 2016 09:36:00
Increased complexity	2	2	18 May 2016 15:13:21	IB	18 May 2016 15:15:26
Possible Expansion Areas	5	12	17 May 2016 12:56:52	IB	18 May 2016 10:39:40
Public Innovation Projects	3	3	18 May 2016 15:19:18	IB	18 May 2016 15:21:56
Infrastructure Projects	2	2	18 May 2016 15:19:06	IB	18 May 2016 15:20:30
Healthcare System	2	2	18 May 2016 15:19:46	IB	18 May 2016 15:21:39
Education System	2	2	18 May 2016 15:19:30	IB	18 May 2016 15:21:31

Need for a Platform	6	13	17 May 2016 13:05:52	IB	18 May 2016 10:40:53
E-governance familiarity	6	6	17 May 2016 13:14:40	IB	18 May 2016 10:42:03
Current Coverage	5	11	17 May 2016 13:03:36	IB	18 May 2016 10:40:18
Current Challenges	6	16	17 May 2016 12:54:12	IB	18 May 2016 10:37:17
Risk Allocation	1	2	18 May 2016 16:40:24	IB	18 May 2016 16:43:58
Lack of Knowledge and Experience	3	3	18 May 2016 16:40:01	IB	18 May 2016 16:42:46
Lack of Cooperation	3	4	18 May 2016 16:39:41	IB	18 May 2016 16:43:27
Lack of a PPP Market	1	1	18 May 2016 16:40:36	IB	18 May 2016 16:41:10

Word	Length	Count	Weighted	Similar
			Percentage	Words
government	10	5	7,94%	government,
				governments
Danish	6	3	4,76%	Danish
less	4	2	3,17%	less
policies	8	2	3,17%	policies
wing	4	2	3,17%	wing
activity	8	1	1,59%	activity
actual	6	1	1,59%	actual
also	4	1	1,59%	also
always	6	1	1,59%	always
ambitious	9	1	1,59%	ambitious
answer	6	1	1,59%	answer
change	6	1	1,59%	change
consequences	12	1	1,59%	consequences
countries	9	1	1,59%	countries
covered	7	1	1,59%	covered
democratic	10	1	1,59%	
Denmark	7	1	1,59%	
discrepancy	11	1	1,59%	
discussed	9	1	1,59%	discussed
done	4	1	1,59%	done
emphasis	8	1	1,59%	emphasis
following	9	1	1,59%	following
forward	7	1	1,59%	forward
governmental	12	1	1,59%	governmental
ground	6	1	1,59%	ground
lacking	7	1	1,59%	lacking
landscape	9	1	1,59%	landscape
left	4	1	1,59%	left
little	6	1	1,59%	little
often	5	1	1,59%	often
possibilities	13	1	1,59%	possibilities
precision	9	1	1,59%	•
probably	8	1	1,59%	
proclamations	13	1	1,59%	proclamations
push	4	1	1,59%	push
radical	7	1	1,59%	radical
reflect	7	1	1,59%	reflect
right	5	1	1,59%	right
sense	5	1	1,59%	sense
sharpness	9	1	1,59%	sharpness
society	7	1	1,59%	society
still	5	1	1,59%	still
50111	5	1	1,5770	5011

Appendix 8 – Word Frequency Test for "Current Challenges" Node

using	5	1	1,59%	using
want	4	1	1,59%	want
work	4	1	1,59%	work

Word	Length	Count	Weighted	Similar
			Percentage	Words
government	10	5	7,94%	government,
				governments
Danish	6	3	4,76%	Danish
lot	3	3	4,76%	lot
less	4	2	3,17%	less
policies	8	2	3,17%	policies
ррр	3	2	3,17%	ppp
wing	4	2	3,17%	wing
activity	8	1	1,59%	activity
actual	6	1	1,59%	actual
also	4	1	1,59%	also
always	6	1	1,59%	always
ambitious	9	1	1,59%	ambitious
answer	6	1	1,59%	answer
bit	3	1	1,59%	bit
change	6	1	1,59%	change
consequences	12	1	1,59%	consequences
countries	9	1	1,59%	countries
covered	7	1	1,59%	covered
democratic	10	1	1,59%	democratic
Denmark	7	1	1,59%	Denmark
discrepancy	11	1	1,59%	discrepancy
discussed	9	1	1,59%	discussed
done	4	1	1,59%	done
emphasis	8	1	1,59%	emphasis
following	9	1	1,59%	following
forward	7	1	1,59%	forward
governmental	12	1	1,59%	governmental
ground	6	1	1,59%	ground
lacking	7	1	1,59%	lacking
landscape	9	1	1,59%	landscape
left	4	1	1,59%	left
little	6	1	1,59%	little
often	5	1	1,59%	often
possibilities	13	1	1,59%	possibilities
precision	9	1	1,59%	precision
probably	8	1	1,59%	probably
proclamations	13	1	1,59%	proclamations
push	4	1	1,59%	push
put	3	1	1,59%	put
radical	7	1	1,59%	radical
reflect	7	1	1,59%	reflect
right	5	1	1,59%	right

Appendix 9– Word Frequency Test for "Current Coverage" Node

see	3	1	1,59%	see
sense	5	1	1,59%	sense
sharpness	9	1	1,59%	sharpness
society	7	1	1,59%	society
still	5	1	1,59%	still
using	5	1	1,59%	using
want	4	1	1,59%	want
work	4	1	1,59%	work
yes	3	1	1,59%	yes

Word	Length	Count	Weighted	Similar
			Percentage	Words
yes	3	4	22,22%	yes
concept	7	2	11,11%	concept
familiar	8	2	11,11%	familiar
done	4	1	5,56%	done
know	4	1	5,56%	know
levels	6	1	5,56%	levels
literature	10	1	5,56%	literature
much	4	1	5,56%	much
really	6	1	5,56%	really
research	8	1	5,56%	research
something	9	1	5,56%	something
sure	4	1	5,56%	sure
talk	4	1	5,56%	talk

Appendix 10 – Word Frequency Test for "E-Governance Familiarity" Node

Word	Length	Count	Weighted	Similar
			Percentage	Words
central	7	7	3,89%	central,
				centralization,
				centralized
also	4	6	3,33%	also
yes	3	6	3,33%	yes
platform	8	6	3,33%	platform,
				platforms
definitely	10	5	2,78%	definitely
governmental	12	5	2,78%	governmental
government	10	4	2,22%	government
make	4	4	2,22%	make
use	3	4	2,22%	use
cooperation	11	3	1,67%	cooperation
good	4	3	1,67%	good
authority	9	2	1,11%	authority
better	6	2	1,11%	better
case	4	2	1,11%	case, cases
countries	9	2	1,11%	countries,
				country
create	6	2	1,11%	create
Denmark	7	2	1,11%	Denmark
develop	7	2	1,11%	develop,
				developed
essential	9	2	1,11%	essential
get	3	2	1,11%	get, gets
innovate	8	2	1,11%	innovate
international	13	2	1,11%	international
knowledge	9	2	1,11%	knowledge
look	4	2	1,11%	look, looking
one	3	2	1,11%	one, ones
policy	6	2	1,11%	policy
ppp	3	2	1,11%	ppp
ppps	4	2	1,11%	ppps
role	4	2	1,11%	role
sector	6	2	1,11%	sector, sectors
solution	8	2	1,11%	solution,
				solutions
able	4	1	0,56%	able
across	6	1	0,56%	across
actually	8	1	0,56%	actually
aim	3	1	0,56%	aim
allocate	8	1	0,56%	allocate
although	8	1	0,56%	although

Appendix 11 – Word Frequency Test for "Need for a Platform" Node

approaches	10	1	0,56%	approaches
areas	5	1	0,56%	areas
aware	5	1	0,56%	aware
base	4	1	0,56%	base
borders	7	1	0,56%	borders
build	5	1	0,56%	build
cheap	5	1	0,56%	cheap
clearly	7	1	0,56%	clearly
conditions	10	1	0,56%	conditions
connect	7	1	0,56%	connect
Danish	6	1	0,56%	Danish
degree	6	1	0,56%	degree
emphasis	8	1	0,56%	emphasis
environment	11	1	0,56%	environment
even	4	1	0,56%	even
expand	6	1	0,56%	expand
failures	8	1	0,56%	failures
far	3	1	0,56%	far
feasible	8	1	0,56%	feasible
focus	5	1	0,56%	focus
forward	7	1	0,56%	forward
	7	1		
general	5	1	0,56%	general
given			0,56%	given
goes	4	1	0,56%	goes
greater			0,56%	greater
grow	4	1	0,56%	grow
happening	9	1	0,56%	happening
higher	6	1	0,56%	higher
highly	6	1	0,56%	highly
increasing	10	1	0,56%	increasing
inside	6	1	0,56%	inside
intelligent	11	1		intelligent
level	5	1	0,56%	level
like	4	1	0,56%	like
long	4	1	0,56%	long
main	4	1	0,56%	main
mean	4	1	0,56%	mean
much	4	1	0,56%	much
necessarily	11	1	0,56%	necessarily
needs	5	1	0,56%	needs
new	3	1	0,56%	new
obstacles	9	1	0,56%	obstacles
obviously	9	1	0,56%	obviously
order	5	1	0,56%	order
organizations	13	1	0,56%	organizations
organizations	13	1	0,56%	organizations
outcomes	8	1	0,56%	outcomes

outlook	7	1	0,56%	outlook
political	9	1	0,56%	political
practice	8	1	0,56%	practice
private	7	1	0,56%	private
problems	8	1	0,56%	problems
public	6	1	0,56%	public
push	4	1	0,56%	push
puts	4	1	0,56%	puts
really	6	1	0,56%	really
recommend	9	1	0,56%	recommend
resources	9	1	0,56%	resources
rise	4	1	0,56%	rise
secure	6	1	0,56%	secure
sense	5	1	0,56%	sense
services	8	1	0,56%	services
show	4	1	0,56%	show

Word	Length	Count	Weighted	Similar
			Percentage	Words
new	3	3	3,53%	new
perspective	11	3	3,53%	perspective
developing	10	3	3,53%	develop,
				developing
area	4	2	2,35%	area, areas
come	4	2	2,35%	come, comes
cooperation	11	2	2,35%	cooperation
depends	7	2	2,35%	depends
infrastructure	14	2	2,35%	infrastructure
innovation	10	2	2,35%	innovation
just	4	2	2,35%	just
projects	8	2	2,35%	projects
school	6	2	2,35%	school, schools
sector	6	2	2,35%	sector
systems	7	2	2,35%	systems
use	3	2	2,35%	use
also	4	1	1,18%	also
better	6	1	1,18%	better
border	6	1	1,18%	border
bridges	7	1	1,18%	bridges
broaden	7	1	1,18%	broaden
building	8	1	1,18%	building
challenges	10	1	1,18%	challenges
complex	7	1	1,18%	complex
complicated	11	1	1,18%	complicated
cost	4	1	1,18%	cost
critical	8	1	1,18%	critical
cross	5	1	1,18%	cross
Danish	6	1	1,18%	Danish
especially	10	1	1,18%	especially
European	8	1	1,18%	European
financing	9	1	1,18%	financing
focus	5	1	1,18%	focus
fruitful	8	1	1,18%	fruitful
health	6	1	1,18%	health
hospitals	9	1	1,18%	hospitals
international	13	1	1,18%	international
invest	6	1	1,18%	invest
large	5	1	1,18%	large
least	5	1	1,18%	least
level	5	1	1,18%	level
life	4	1	1,18%	life
look	4	1	1,18%	look

Appendix 12 – Word Frequency Test for "Possible Expansion Areas" Node

lot	3	1	1,18%	lot
make	4	1	1,18%	make
market	6	1	1,18%	market
mass	4	1	1,18%	mass
need	4	1	1,18%	need
perhaps	7	1	1,18%	perhaps
phenomenon	10	1	1,18%	phenomenon
possibilities	13	1	1,18%	possibilities
ppp	3	1	1,18%	ppp
private	7	1	1,18%	private
problems	8	1	1,18%	problems
products	8	1	1,18%	products
public	6	1	1,18%	public
really	6	1	1,18%	really
regarding	9	1	1,18%	regarding
roads	5	1	1,18%	roads
simply	6	1	1,18%	12
situation	9	1	1,18%	situation
skills	6	1	1,18%	skills
society	7	1	1,18%	society
solutions	9	1	1,18%	solutions
talking	7	1	1,18%	talking
technology	10	1	1,18%	technology
terms	5	1	1,18%	terms
types	5	1	1,18%	types

Appendix 13 – Word Frequency Test for "Potential Challenges Challenges" Node

Word	Length	Count	Weighted	Similar
	-		Percentage	Words
much	4	3	5,17%	much
also	4	2	3,45%	also
capacities	10	2	3,45%	capacities,
				capacity
combine	7	2	3,45%	combine
complexity	10	2	3,45%	complexity
concerned	9	2	3,45%	concerned
strategy	8	2	3,45%	strategy
system	6	2	3,45%	system
terms	5	2	3,45%	terms
become	6	1	1,72%	become
broader	7	1	1,72%	broader
careful	7	1	1,72%	careful
challenges	10	1	1,72%	challenges
changes	7	1	1,72%	changes
critical	8	1	1,72%	critical
decreasing	10	1	1,72%	decreasing
deliver	7	1	1,72%	deliver
depends	7	1	1,72%	depends
difficult	9	1	1,72%	difficult
disruptive	10	1	1,72%	disruptive
diversity	9	1	1,72%	diversity
everything	10	1	1,72%	everything
expertise	9	1	1,72%	expertise
extremely	9	1	1,72%	extremely
focus	5	1	1,72%	focus
increasing	10	1	1,72%	increasing
kind	4	1	1,72%	kind
level	5	1	1,72%	level
liberation	10	1	1,72%	liberation
looking	7	1	1,72%	looking
maintain	8	1	1,72%	maintain
management	10	1	1,72%	management
one	3	1	1,72%	one
overall	7	1	1,72%	overall
personnel	9	1	1,72%	personnel
perspective	11	1	1,72%	perspective
pile	4	1	1,72%	pile
platform	8	1	1,72%	platform
remarkable	10	1	1,72%	remarkable
sharpen	7	1	1,72%	sharpen

social	6	1	1,72%	social
something	9	1	1,72%	something
specific	8	1	1,72%	specific
strain	6	1	1,72%	strain
techniques	10	1	1,72%	techniques
technologies	12	1	1,72%	technologies
things	6	1	1,72%	things
want	4	1	1,72%	want

Appendix 14 – Word Frequency Test for "Potential Platform's Characteristics" Node

Word	Length	Count	Weighted	Similar
	8		Percentage	Words
society	7	5	3,03%	society
develop	7	5	3,03%	develop,
-				developing,
				development
make	4	4	2,42%	make
models	6	4	2,42%	models
organization	12	4	2,42%	organization,
C				organizations,
				organizing
projects	8	4	2,42%	projects
actually	8	3	1,82%	actually
civil	5	3	1,82%	civil
partnerships	12	3	1,82%	partnership,
				partnerships
people	6	3	1,82%	people
ppps	4	3	1,82%	ppps
recruit	7	3	1,82%	recruit,
				recruitment
area	4	2	1,21%	area, areas
businesses	10	2	1,21%	businesses
competences	11	2	1,21%	competences,
				competent
costly	6	2	1,21%	costly, costs
Denmark	7	2	1,21%	Denmark
European	8	2	1,21%	European
government	10	2	1,21%	government,
				governments
innovated	9	2	1,21%	innovated,
				innovation
keep	4	2	1,21%	keep
kind	4	2	1,21%	kind
market	6	2	1,21%	market
member	6	2	1,21%	member,
				members
municipal	9	2	1,21%	municipal
needs	5	2	1,21%	needs
perhaps	7	2	1,21%	perhaps
pipeline	8	2	1,21%	pipeline
platform	8	2	1,21%	platform
research	8	2	1,21%	research
right	5	2	1,21%	right

aslutions	0	2	1 210/	astriana
solutions	9	2	1,21%	solutions
something	9	2	1,21%	something
voluntary	9	2	1,21%	voluntary
wishes	6	2	1,21%	wishes
accountability	14	1	0,61%	accountability
also	4	1	0,61%	also
among	5	1	0,61%	among
analysis	8	1	0,61%	analysis
authorities	11	1	0,61%	authorities
aware	5	1	0,61%	aware
become	6	1	0,61%	become
better	6	1	0,61%	better
bigger	6	1	0,61%	bigger
buy	3	1	0,61%	buy
certain	7	1	0,61%	certain
challenges	10	1	0,61%	
cheaper	7	1	0,61%	cheaper
connect	7	1	0,61%	connect
context	7	1	0,61%	context
course	6	1	0,61%	course
created	7	1	0,61%	created
delivered	9	1	0,61%	delivered
different	9	1	0,61%	different
		1		
easier	6	1	0,61%	easier
every			0,61%	every
export	6	1	0,61%	export
face	4	1	0,61%	face
focus	5	1	0,61%	focus
framework	9	1	0,61%	framework
house	5	1	0,61%	house
industries	10	1	0,61%	industries
initiate	8	1		initiate
interesting	11	1	0,61%	interesting
knowledge	9	1	0,61%	knowledge
least	5	1	0,61%	least
level	5	1	0,61%	level
local	5	1	0,61%	local
main	4	1	0,61%	main
maintains	9	1	0,61%	maintains
maybe	5	1	0,61%	maybe
means	5	1	0,61%	means
might	5	1	0,61%	might
much	4	1	0,61%	much
nature	6	1	0,61%	nature
new	3	1	0,61%	new
ngos	4	1	0,61%	ngos
one	3	1	0,61%	one
	5	1	0,0170	

order	5	1	0,61%	order
outlook	7	1	0,61%	outlook
parameters	10	1	0,61%	parameters
parliamentary	13	1	0,61%	parliamentary
personnel	9	1	0,61%	personnel
perspective	11	1	0,61%	perspective
political	9	1	0,61%	political
ppp	3	1	0,61%	ppp
present	7	1	0,61%	present
prioritization	14	1	0,61%	prioritization
private	7	1	0,61%	private
products	8	1	0,61%	products
professional	12	1	0,61%	professional
purchase	8	1	0,61%	purchase
reduce	6	1	0,61%	reduce
row	3	1	0,61%	row
sector	6	1	0,61%	sector
services	8	1	0,61%	services
set	3	1	0,61%	set
several	7	1	0,61%	several
sharing	7	1	0,61%	sharing
specific	8	1	0,61%	specific

Appendix 15 – Word Frequency Test for "View on E-Governance in PPPs" Node

Word	Length	Count	Weighted	Similar
	0		Percentage	Words
government	10	7	5,93%	governance,
				government
platform	8	4	3,39%	platform,
				platforms
possibilities	13	3	2,54%	possibilities,
				possibility,
				possible
projects	8	3	2,54%	projects,
				projects'
use	3	3	2,54%	use, used,
				using
develop	7	2	1,69%	develop,
• •			1.600/	development
idea	4	2	1,69%	idea, ideas
interested	10	2	1,69%	interested,
•			1.600/	interesting
lot	3	2	1,69%	lot
new	3	2	1,69%	new
play	4	2	1,69%	play
ppp	3	2	1,69%	ppp
public	6	2	1,69%	public
role	4	2	1,69%	role
sector	6	2	1,69%	sector
ways	4	2	1,69%	ways
access	6	1	0,85%	access
actors	6	1	0,85%	actors
actually	8	1	0,85%	actually
arenas	6	1	0,85%	arenas
benefit	7	1	0,85%	benefit
build	5	1	0,85%	build
bureaucracy	11	1	0,85%	bureaucracy
centre	6	1	0,85%	centre
certain	7	1	0,85%	certain
citizens	8	1	0,85%	citizens
combine	7	1	0,85%	combine
control	7	1	0,85%	control
core	4	1	0,85%	core
countries	9	1	0,85%	countries
course	6	1	0,85%	course
covered	7	1	0,85%	covered
critical	8	1	0,85%	critical

depend	6	1	0,85%	depend
desirable	9	1	0,85%	desirable
difficulties	12	1	0,85%	
digital	7	1		digital
discuss	7	1	0,85%	discuss
drive	5	1	0,85%	drive
	8	1	,	
european	8		0,85%	european
exchange		1	0,85%	exchange
find	4	1	0,85%	find
flow	4	1	0,85%	flow
focus	5	1	0,85%	focus
forces	6	1	0,85%	forces
forward	7	1	0,85%	forward
front	5	1	0,85%	front
good	4	1	0,85%	good
help	4	1	0,85%	help
imagine	7	1	0,85%	imagine
information	11	1	0,85%	information
infrastructures	15	1	0,85%	infrastructures
join	4	1	0,85%	join
key	3	1	0,85%	key
lead	4	1	0,85%	lead
least	5	1	0,85%	least
less	4	1	0,85%	less
management	10	1	0,85%	management
maybe	5	1	0,85%	maybe
mechanisms	10	1	0,85%	mechanisms
national	8	1	0,85%	national
one	3	1	0,85%	one
part	4	1	0,85%	part
population	10	1	0,85%	population
potential	9	1	0,85%	potential
private	7	1	0,85%	private
probably	8	1	0,85%	probably
problems	8	1	0,85%	problems
put	3	1	0,85%	put
response	8	1	0,85%	response
see	3	1	0,85%	see
set	3	1	0,85%	set
several	7	1	0,85%	several
solution	8	1	0,85%	solution
solve	5	1	0,85%	solve
	5	1	0,85%	
speed standards	9	1	,	speed standards
	7	1	0,85%	
support			0,85%	support
sure	4	1	0,85%	sure
terms	5	1	0,85%	terms

tools	5	1	0,85%	tools
understand	10	1	0,85%	understand
whether	7	1	0,85%	whether
work	4	1	0,85%	work
yes	3	1	0,85%	yes