Portuguese Public Procurement Governance Model

Isabel da Rosa, Universidade de Lisboa, Portugal, Darosa.isabel@gmail.com
José Tribolet, Universidade de Lisboa, Portugal, Jose.tribolet@inesc.pt
Miguel Mira da Silva, Universidade de Lisboa, Portugal, Mms@tecnico.ulisboa.pt

Abstract

Public Procurement in Europe represents 19% of GDP. The 2014 European Directives on Public Procurement highlight the need for governance measures in Member States. Portugal has been considered a pioneer in electronic Public Procurement and, following Europe’s last guidelines, is dedicating attention to a formal governance model set up. A governance model is fundamental to enhancing integrity in Public Procurement, supporting sustainable and inclusive growth, and reinforcing citizens’ trust. This study aims to analyse the evolution of Public Procurement governance in the Portuguese state and design a model within the Enterprise Governance context. Our proposal builds on the Enterprise Ontology principles and the design uses DEMO methodology to represent the model. It mainly aims to address the lack of articulation among key public entities and to increase alignment between government strategic objectives and public entities action plans. The result of our study observes the recent OECD recommendations on Public Procurement.

Keywords: Enterprise Ontology, Enterprise Governance, DEMO, Public Procurement

1. INTRODUCTION

Within the scope of the European Union Single Market principle, public procurement has been considered as a determinant tool [EC Grow Directorate 2015].

Portugal has been influenced by European Union (EU) policies and public procurement has changed dramatically over the last 15 years with the creation of public entities and the reorganization of services and responsibilities of the National Public Purchasing System (NPPS). In Figure 1 it is illustrated the main milestones regarding the creation of public entities that introduced significant changes in the NPPS.
Some of these changes represented a profound revolution in public procedures with the onset of aggregation of purchases for several public entities, the conduct of electronic auctions and the conclusion of framework agreements for categories common to the whole public administration.

All these changes were achieved through the individual effort of key public bodies and the only articulation between entities derived from the enforcement of some measures. With the growing complexity of the system, the lack of any explicit governance solution for public procurement all over this period is surprising. However, and because of that, it is not surprising that organizations stood for different interests and different positions and the absence of orchestration and integrity led to difficulties in daily life of public procurers and poor results.

Without a governance model, public procurement lacks unity and integration, with no alignment among organizations and among people. Consequently, together with the growing complexity of the Information Technology (IT), it will be very difficult to implement any changes in the existing system.

### 1.1. Research Focus

In recent years, in most international and high level organisations, such as OECD (Organisation for Economic Cooperation and Development), UN (United Nations) and European Commission (EC), and the academia, governance has gained growing attention and particular relevance in development and sustainability of countries and enterprises.

According to the last EU directives on public procurement, from 2014, Member States (MS) will have to transpose them into national laws until April 2016. This is the first time that MSs have the need for a set of obligations under the governance scope [Commission 2014].
Portugal has not implemented, so far, a governance scheme to ensure the holistic and integrative orchestration of all key entities. In this case, public entities will have to handle EU obligations on an individual basis, which in many cases can be very difficult, especially if the result depends on more than one organisation. Usually several problems occur, such as: late responses; deviations from the expected results; lack of information integrity; dilution of duties and failure to assume responsibilities.

This study presents a brief summary of the evolution of key public entities in the field of Public Procurement over the last 12 years in Portugal and proposes a governance model based on the Enterprise Ontology and Enterprise Governance background to address the abovementioned problems.

1.2. Research Methodology

Our research methodology is based on Design Science Research (DSR), which comprises two complementary phases: build and evaluate. Unlike behaviour research, design-oriented research builds a “to-be” conception and then seeks to build the system according to the defined model taking into account restrictions and limitations [Österle et al. 2011]. Building and evaluation of artefacts designed to meet identified business needs are the foundation of research in design science [Hevner et al. 2004].

The building process covers two stages, whereas the evaluation process comprises only one. Figure 2 describes the governance model construction steps in each phase. This research approach has already been used in other research papers [Pereira ; Silva 2012], [De Haes ; Grembergen 2008] and [Vicente ; Silva 2011].

<table>
<thead>
<tr>
<th>BUILD</th>
<th>EVALUATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct Definition</td>
<td>Model Construction</td>
</tr>
<tr>
<td>Domain definition</td>
<td>Analysing the relation between actors and roles</td>
</tr>
<tr>
<td>Model objective definition</td>
<td>Integrate constructs</td>
</tr>
<tr>
<td>Definition of the model components</td>
<td>DEMO representation</td>
</tr>
</tbody>
</table>

Figure 2 – Design Research Methodology stages

We also followed the four principles a design-oriented IS research must observe [Österle et al. 2011]:

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15ª Conferência da Associação Portuguesa de Sistemas de Informação (CAPSI 2015)
• **Abstraction.** This paper proposes a governance model for public procurement in the Portuguese Public Administration. This model can be used in any MS, because the level of abstraction is guaranteed under the three dimensions of the model: type of structure, functions and organisational framework. In this study we also describe its application to the present situation in Portugal.

• **Originality.** The proposed artefact is not present in the body of knowledge of the domain.

• **Justification.** The method proposed to evaluate the artefact is the first step to understand the viability of our proposal.

• **Benefit.** It is necessary to implement formal solutions to deal with public procurement governance in the near future. This necessity is stated by many national and international organisations, and is imposed by the 2014 European directives. Growing complexity requires the development and implementation of strategic, evidence-based and innovative policies in order to strengthen public governance respond effectively to diverse and disruptive economic, social and environmental challenges and deliver on government’s commitments to citizens.

A design artefact is complete and effective when it meets the requirements and constraints of the problem it is meant to solve. In this paper we evaluated our artefacts through interviews with experienced specialists from public procurement entities, at national and international level.

1.3. **Structure of this Paper**

This paper is divided into seven sections identified by a number, as follows: 1. Introduction; 2. Problem Definition; 3. Related Work; 4. Proposal Presentation; 5. Proposal Demonstration; 6. Proposal Evaluation; and 7. Conclusions.

2. **Problem Definition**

The European Directives define procurement as the acquisition, by means of a public contract, of works, supplies or services, by one or more contracting authorities from economic operators chosen by those contracting authorities, whether or not the works, supplies or services are intended for a public purpose [Commission 2014].
Public Procurement in Portugal is expected to undergo a profound change, following the publication of three legal instruments that will change the implemented processes, the supporting systems and the strategic objectives defined until now.

These instruments are: (1) the law governing the operation of electronic platforms in Portugal, (2) the updated code that regulates public procurement, by transposing European Directives 2014/24/EU, 2014/25/EU (repealing Directives 2004/17/EC and 2004/18/EC) and 2014/23/EU on the award of concession contracts, adopted by the European Parliament and the Council of the European Union, and (3) the national system definition for electronic invoice in public procurement following the transposition of Directive 2014/55/EU.

Particularly in the cases described in (1) and (3), these instruments will bring about significant changes in the information system architecture that had been implemented since November 2009, when electronic public procurement became mandatory.

In both cases, and considering the architectures under design, a set of public entities will have a critical role in the implementation of new services and the development of new IT solutions. The overall success will depend not only on all the individual organisations, actions and performances but also, and above all, on the integration of those individual efforts and results.

References to the need for governance in public procurement in Directive 2014/24/EU only concern a reduced set of principles, and they derive from the perspective of the European Union, as a central structure that requires coordination in the creation of the Single Market.

Joining, both perspectives, national transformation processes and European Union requirements, a national governance scheme should be put in place to accommodate these three questions:

Q1: How to ensure data consistency and quality in the formal reports to international organisations regarding national public procurement performance?

Q2: How to ensure unity and integration of all key stakeholders in public procurement solutions?

Q3: How to ensure that action plans of public entities are in line with government strategic objectives for public procurement?

The evolution of Public Procurement over the last years shows that the system has managed to survive without any governance model. Although this might be considered an amazing fact, it is also true that this was possible due to the evolution of public procurement, which recently gained some projection even within the government concerns. Indeed, there have been significant changes in the nature of the procedures and in the way they were conducted, but also in the systems
that supported them all. Their complexity has increased exponentially since 2009, when the national electronic framework was set up.

As illustrated in Figure 3, despite the growing relevance of public procurement, there has been no unity orchestration of all parties involved.

Figure 3 – Public procurement responsibilities evolution

Changes in existing public bodies have been a constant source of instability.

Recent years have frequently seen the merger and termination of several bodies and the creation of new ones, and this is not merely an aspect of public procurement management, it also reflects the need to reorganize the state and decrease its weight in public expenditure.

The next challenges, and most particularly in the specific case of interoperability in the pre-award phase, will require highly complex technical solutions. Whereas change was once a contained transactional event (and easier to manage), it is now more open-ended, radical, complex, personal, and continuous. “Transformation” has emerged as the new type of change, and it is by far the most prevalent and complex type occurring in organizations today. In general, leaders do not understand transformational change or how to lead it, which is causing virtually all the change-related problems they are now facing [Anderson ; Anderson 2010].

In Public Administration this reality is exacerbated by the fact that their universe is not restricted to a single organization, but rather comprises a wide range of organizations that compete with each other and sometimes have overlapping responsibilities and diverging interests.
We are witnessing a time when leaders and managers are becoming more aware of the need for a structure that leads institutions throughout the transformation process, failing which the objectives pursued will probably not be achieved, with the risk of causing tremendous resistance and burnout in people, loss of employee morale, and turmoil in the culture of the organizations [Anderson; Anderson 2010].

A governance solution is therefore needed in order to answer those questions and promote a single, integrated view of public procurement in Portugal.

3. RELATED WORK

This research was based on a context outlined by three references: Ontological Model, Enterprise Governance and Business Transformation Management.

The reason for choosing these references is the fact that some concepts referred to in this study have different definitions and different perspectives in literature and in several sciences. This is mainly the case for governance, our major subject.

Governance

For this study, we based our approach on the governance concept advocated by Hoogervorst because it is clearly linked to transformation and makes a distinction between administration and governance, which in many concepts is not easy to understand.

As referred by Hoogervorst, the term ‘governance’ stems from the Latin word *gubernäre* (in turn borrowed from the Greek language), which means to control or steer, in the original meaning, the steering of a ship. Governance can thus be associated with guiding and giving direction. It is important to distinguish governance from management. The latter term has its origin in the Latin word *manus* (hand). Both terms are relevant within the enterprise context. To differentiate management from governance, we will consider ‘management’ from an operational, implementing point of view, and will use the term ‘governance’ in the context of enterprise change. In other words, governance guides developments that lead to a new (or partly new) enterprise [Hoogervorst 2012].

Governance provides the guardrails and steering wheel to keep the transformation on the right track [Westernman, Bonnet & McAfee 2014].

In fact, for the last three decades, governance has been a prominent subject in Public Administration and we can find different definitions depending on the context [Frederickson 2007]. Besides that,
there are many different types of governance and we need to make a brief review in order to understand each one of them and decide which governance we will focus on:

- Corporate Governance – is the system by which organizations are directed and controlled [De Haes & Grembergen 2008]; it is the responsibility delegated by stakeholders and the public, defined by legislators and regulators, and shared by boards, in some measure, with managers [Webb et al. 2006]. Briefly stated, corporate governance regards directions for internal (managerial) control that aim to arrange financial transparency and prudent financial conduct in order to safeguard the interests of shareholders [Coley et al. 2005].

- Enterprise Governance – is a set of responsibilities and practices exercised by the board and executive managers, with the goal of providing strategic direction, ensuring that plans and objectives are achieved, assessing that risks are proactively managed, and assuring that the enterprise’s resources are used responsibly [De Haes & Grembergen 2008]. Enterprise governance is the overarching type of governance that encompasses corporate and IT governance [Hoogervorst 2012].

IT Governance (ITG) – literature has demonstrated a lack of a clear shared understanding of the term ITG [Pereira & Silva 2012]. Pereira identified several ITG definitions in literature, with minor differences from where we select two: ITG is the responsibility of the board of directors and executive management. It is an integral part of enterprise governance and consists in the leadership and organizational structures and processes which ensure that organization’s IT sustains and extends the organization’s strategies and objectives [Information Technology Governance Institute 2004]; the strategic alignment of IT with business such that maximum business value is achieved through the development and maintenance of effective IT control and accountability, performance management, and risk management [Webb et al. 2006].

**Ontological Model**

Ontological theories deal with the nature of things. Within the discipline of enterprise engineering, there is a particular concern with cause-effect relationships in systems.

Ontological theories are valuated by their soundness and appropriateness.

The Enterprise Ontology theory produces conceptual models that are [Dietz 2006]:

- Coherent – the distinguished aspect models constitute a logical and truly integral whole;
- Comprehensive – all relevant issues are covered, the whole is complete;
- Consistent – the aspect models are free from contradictions or irregularities;
- Concise – no superfluous matters are contained in it, the whole is compact and succinct;
- Essential – the conceptual model shows only the essence of the enterprise (its deep structure) and abstracts from all realization and implementation issues.

DEMO (Design & Engineering Methodology for Organizations) is a methodology for modelling, (re)designing and (re)engineering organizations and networks of organizations [Dietz 2006]. DEMO allows modelling the Enterprise Ontology (EO) of an organization. Enterprise Ontology is defined as the fully implementation independent understanding of the essence of an organization. We have chosen EO because it can help us expand the expressiveness of the model description and, consequently, allow for a better alignment between expectations and perceptions. EO is a viable basis for practically dealing with organizational changes of all kinds [Institute 2015].

DEMO consists of four aspect models, represented by particular diagrams, tables and lists [Mendes 2013]:

- The Construction Model (CM) – specifies the identified transaction types and the associated actor roles, as well as the information links between the actor roles and the information bank. The CM specifies the composition, environment, and structure of an organization:
  - The Interaction Model (IAM) – shows the active influences between actor roles i.e. the execution of transactions;
  - The Interstriction Model (ISM) – shows the passive influences between actor roles, i.e., the taking into account of existing facts by an actor role when being active.

- The Process Model (PM) – contains, for every transaction type in the CM, the specific transaction pattern of the transaction type. The PM also contains the causal and conditional relationships between transactions. These relationships determine, in addition to the transaction patterns, the possible trajectories in the Coordination-world. In other words, the PM specifies the state space as well as the transition space of the Coordination-world;

- The Action Model (AM) – specifies the action rules that serve as guidelines for the actors in dealing with their agenda. For every coordination step, there is an action rule that guides how the performing actor role should respond to the reached status. At the ontological level of abstraction there is nothing below the AM;
- The State Model (SM) – specifies the state space of the P-world: the object classes and fact types, the result types, and the ontological coexistence rules. SM is the ideal starting point for developing and maintaining the data dictionary of an enterprise and its simplifies the identification of business components (software components), based on the chunks of fact types around categories.

These models constitute the complete ontological model of Business-organization and subsequently represent the ontological model of the corresponding enterprise.

The Interaction Model (IAM) is expressed by the Actor Transaction Diagram (ATD) and the Transaction Result Table (TRT). These two high level artefacts are the ones we use in this paper to illustrate the essence of the proposed governance model.

**Business Transformation Management**

Within the scope of Business Transformation Management we paid particular attention to a recent methodology named Business Transformation Management Methodology (BTM²) that aims to be different from other methodologies by assuring integration and holistic transformation management through a high level layer called Meta Management.

Meta Management is business-driven and value-oriented, and integrates three pillars, namely: management disciplines, transformation lifecycle and leadership.

In the case of leadership it is defended that the business transformation process is only successful if leaders are aware of their roles and communication and have established a solid culture.

In fact, in change management theory, an often neglected aspect of the process is the need to build a coalition [Jick & Peiperl 2002]. Though this appears implicitly in a number of change models, the dimensions of the team needed and their roles has been largely missing from major change conceptualizations [Uhl & Gollenia 2012].

BTM² aims to handle this by providing an organizational structure for the management roles (formal and informal) that will accompany the life cycle of the transformation process.

The essence of roles in an organizational structure is the reference to the model we are proposing.

**4. PROPOSAL**

We propose the creation of a governance model for the Portuguese Public Procurement as a solution to deal with the problems experienced in the past (identified in section 2), as a reference to promote
the continuous development of the system that has been implemented, and as a solution to face the significant challenges implicit in the new strategic objectives of the electronic system.

The structure of the presentation of our proposal is in line with the structure of the methodology described in section 1.2. Thus, we describe the construction of our model in two steps: the construct definition and the model construction of the building phase.

The construct definition step refers to the activities:

- Domain definition
- Model objective definition
- Definition of the model components

On the domain definition, the main concern is to delimit the scope, which in our study is the conception of a governance model for public procurement in Portugal, and therefore, is limited to public institutions that play a key role in guiding Public Procurement as a result of the Portuguese government policy and in accordance with the legal framework in force.

At the model objective definition level, we established the correlation with the problem identification in section 2. Our proposal seeks to provide an answer to the three questions in the problem set-up, which means:

Answer to Q1: To provide one single and accountable voice for national public procurement information that is able to collect and integrate data from all the relevant components of the national system;

Answer to Q2: To provide an orchestration scheme for the key public bodies related to public procurement;

Answer to Q3: To provide direction and enforce the articulation for organisations activities through alignment guidance.

Considering governance as the vehicle through which the enterprise stakeholders can participate for guiding and achieving an integrated construction model [Henriques, Tribolet, & Hoogervorst 2010], and considering Public Administration as a set of public entities with different objectives, interests, autonomy levels and development degrees we propose a model, in Figure 4, based on three components: structure, attributions and empowerment positioning.
The last component it is very critical and fundamental because the positioning inside organic structure of Public Administration will determine the authority level in the relation with other public entities.

![Diagram](image)

**Figure 4 – Public procurement model components**

Within the phase model construction we analysed the relation between actors and roles, we integrate all the components of the model and, finally, we use DEMO for representation purposes.

The structure we propose encloses some of the principles defined in BTM² for roles definition within the Meta Management layer.

BTM² advocates that roles should be defined at 3 levels: strategy, program and project, which correspond respectively to the concern levels of “why”, “what” and “how” in the process to be implemented [Uhl & Gollenia 2012].

By analogy, the proposed structure is multi-level as shown in Figure 5.
The governance structure has four actors: the executive commission, the advisory board, the technical committee and the ministerial representatives group. The executive commission is the top level of the structure and the one that articulates with the government.

The responsibilities of the governance structure derive from the objective that is inherent to its creation and is driving the transformation processes. We organize those responsibilities in four dimensions as represented in Figure 6.
In the first case, the documentation dimension, the responsibility of the governance structure is to create a repository of documents on the transformation process, which should include plans, reports, diagrams, stakeholders, KPIs, etc., and to establish the rules for managing that repository. This is a fundamental responsibility because the effectiveness of the transformation process will depend on the current level of knowledge (representation of the situation AS-IS) and the degree of knowledge of what is to be achieved (representing the TO-BE situation) and the effective coordination of the steps that mediate both states.

With respect to the second dimension, plans alignment aims to ensure that the activity of the various public bodies involved in the transformation process is properly aligned with the strategic objectives set by the government and underlying the legal framework.

Since the activity of public entities is embodied in their activity plans and projects, it is critical to ensure the alignment between strategy and operation.

Regarding the communication dimension, the goal is to ensure the structure and the rules that allow the dissemination of information (top-down perspective) and to collect feedback from all the stakeholders involved (bottom-up perspective).

Finally, and very important for the sustainability of the governance function, we have transparency and accountability. Both, the results of the governance structure activity and the progress of the transformation process must be published.

This last dimension is particularly relevant in Public Administration where decisions and activities might affect organizations, citizens and the economy in general.

In the public procurement field there is a direct impact on the socio-economic system of the country.

In order to formalize the proposal, we present a DEMO white-box model for the public procurement governance. A white-box model is a direct conceptualization of the ontological system definition and captures the construction and the operation of a system, while abstracting from implementation details [Dietz 2006].

The first model is the Construction Model and is described by the Transaction Result Table (TRT), the Result Structure Chart and the Actor Transaction Diagram (ATD). In order to achieve this model we applied the guidelines defined in [Dietz 2006] to a text that describes the function of the governance structure. Within this phase, we made a distinction between the Ontological, Infological and Datalogical actions described, as referred to in the Enterprise Ontology Distinction axiom.
The next step is the identification of C-acts/facts, P-acts/facts and actor roles, using the Performa (Ontological) items identified in the previous step.

This step is called Coordination-Actors-Production Analysis but we reduced its complexity when compared with other methodologies, because from now on we will only consider the Ontological actions identified in this step.

After these analyses, we identified the transactions by clustering the identified C-acts/facts and P-acts/facts in the so called Transaction Pattern Synthesis. The Transaction axiom can be helpful in this step, because it guarantees that each P-act/fact or C-act/fact previously identified corresponds to a complete transaction. Then, for each identified transaction type, the result type (i.e., the Production fact created) was formulated. The result is presented in Figure 7 below, called Transaction Result Table.

<table>
<thead>
<tr>
<th>Transaction</th>
<th>Result</th>
<th>Executed by</th>
</tr>
</thead>
<tbody>
<tr>
<td>T01 – TPM Start</td>
<td>R01 – TPM started</td>
<td>Executive Commission</td>
</tr>
<tr>
<td>T02 – TPM Impacts Analysis</td>
<td>R02 – TPM impact analyzed</td>
<td>Advisory Board</td>
</tr>
<tr>
<td>T03 – TPM and SO Alignment Analysis</td>
<td>R03 – TPM and SO alignment analyzed</td>
<td>Executive Commission</td>
</tr>
<tr>
<td>T04 – SO Start</td>
<td>R04 – SO started</td>
<td>Government</td>
</tr>
<tr>
<td>T05 – SO End</td>
<td>R05 – SO ended</td>
<td>Government</td>
</tr>
<tr>
<td>T06 – PGM Start</td>
<td>R06 – PGM started</td>
<td>Technical Committee</td>
</tr>
<tr>
<td>T07 – PGM End</td>
<td>R07 – PGM ended</td>
<td>Technical Committee</td>
</tr>
<tr>
<td>T08 – Program KPIs Definition</td>
<td>R08 – Program PG KPIs defined</td>
<td>Executive Commission</td>
</tr>
<tr>
<td>T09 – PM Repository Creation</td>
<td>R09 – Repository of PM created</td>
<td>Technical Committee</td>
</tr>
<tr>
<td>T10 – Program Viability Evaluation</td>
<td>R10 – Program PG viability evaluated</td>
<td>Ministerial Representatives</td>
</tr>
<tr>
<td>T11 – PIM Definition</td>
<td>R11 – PIM PJ details defined</td>
<td>Project Manager</td>
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<tr>
<td>T12 – PIM Start</td>
<td>R12 – PIM PJ started</td>
<td>Project Manager</td>
</tr>
<tr>
<td>T13 – PIM End</td>
<td>R13 – PIM PJ ended</td>
<td>Project Manager</td>
</tr>
<tr>
<td>T14 – Project Monitoring</td>
<td>R14 – Projects for period P monitored</td>
<td>Technical Committee</td>
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<tr>
<td>T15 – PGM Monitoring</td>
<td>R15 – Programs for period X monitored</td>
<td>Executive Commission</td>
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<tr>
<td>T16 – PGM Results Publish</td>
<td>R16 – PGM results published</td>
<td>Executive Commission</td>
</tr>
<tr>
<td>T17 – Communication Plan Definition</td>
<td>R17 – Communication Plan Objectives</td>
<td>Executive Commission</td>
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</tbody>
</table>

Figure 7 – Transaction Result Table for Public Procurement Governance Model

By performing production acts, subjects contribute to bringing about the goods and/or services that are delivered to the environment of the enterprise. By performing coordination acts, subjects enter into, and comply with, commitments towards each other regarding the performance of production acts [Mendes 2013].
After identifying the Ontological transaction types, its results and dependencies, we modelled the Actor Transaction Diagram (ATD), using the notation proposed by Dietz and represented in Figure 9.

Figure 9 – Actor Transaction Diagram for Public Procurement Governance Model
With this model construction we identified and represented in a schematic way the essentials of our governance proposal for public procurement.

Besides the actors and their relations that are explicit in Figure 5, we can summarize the major model attributes as follows:

- Provides strategic and operational alignment;
- Provides a structure to enhance key entities orchestration;
- Provides transparency;
- Reinforces accountability;
- Provides information integration;
- Provides unity and articulation for program management;
- Provides unity and articulation for project management;
- Provides viability analysis;
- Provides standards on KPIs for public procurement;
- Enforces a communication plan.

All these attributes are related to the objectives defined in the construct definition phase (under the model objective definition step) and aligned with OECD recent recommendations to governments for promoting development and sustainability that were launched in February 2015.

5. PROPOSAL DEMONSTRATION

In this section we describe the characterization of the proposed Governance Model for Public Procurement in the context of the current Portuguese Public Administration set-up.

This means, defining a concrete type and composition of the proposed structure for the Portuguese situation and also the setting within the State organic.

The attributions and responsibilities are the ones defined under the proposal section.

The first and most important question in the Portuguese economic conditions concerned the type of structure. For the governance structure there were two basic options: create a new dedicated entity or create a flexible structure.
Both options present several advantages and disadvantages but, for the time being, the choice we consider the most adequate is the flexible structure type because it will not require as much time, resources and capital as the creation of a new entity.

Based on this point, the next question is what should be its positioning in the organic of the Public Administration. This is equally a sensitive point because there are direct implications for the public contracts policy and, of course, for the expenditure management at a national level.

Therefore, we firmly advise that such structure should report to the Prime Minister’s Cabinet, which means a framework setting as shown in Figure 10.
Only this hierarchy can guarantee a strong sponsorship throughout the transformation processes.

The structure was defined under section 4 (proposal) and illustrated in Figure 5. The names of some actors are self-evident, as in the case of Ministerial Representatives, but in other cases, namely the Executive Committee, the Advisory Board and the Technical Committee, a small description becomes necessary because the composition of these actors will be crucial to the achievement of the objectives of the governance structure.

For these three actors in particular, we describe their composition in Figure 11 and can say they include the key stakeholders in Public Procurement as defined in the legal framework and in the government guidelines.
During the design process, an important concern was whether the governance structure should report on policy and functional aspects. In order to address this concern, the composition of the executive committee basically aims to ensure an alignment with the policy set, and the technical committee seeks to ensure the management of a set of measures that will guarantee that alignment.

As referred by Westerman, the only effective way we’ve seen to drive transformation is top-down, through strong senior executive direction coupled with methods that engage workers in making the change happen [Westerman, Bonnet & McAfee 2014].

The type of structure, the functions and the empowerment that results from the model application to the Portuguese context it will enable the government to ensure a solution for the governance European guidelines and to improve the articulation among all the key stakeholders.

6. PROPOSAL EVALUATION

In order to validate that our solution meets the objectives [Osterle, et al. 2011] and get some feedback on our conclusions, we decided to use a “User Opinion study” [Pries-Heje, Baskerville, & Venable 2004]. We planned interviews with public bodies that are key stakeholders in Public Procurement in Portugal and that in our model should be part of the Technical Committee. We also had the privilege of interviewing a senior expert from OECD who is involved in the development of
recommendations on Public Procurement. The interviews aimed to present them the results of the research and obtain their overall evaluation and feedback. In total we conducted three interviews.

The questions were classified into two types

- Open questions – answers provided with no format condition
- Agreement questions – answer provided by 1 to 5 (1 – nothing, 2 – little, 3 – enough, 4 – quite and 5 – very much).

All the interviewees are experienced managers, two of them are board members and the other one holds a head of unit post.

An analysis of the results of the interviews shows in general a highly positive feedback to the proposed model, although it was felt that in many cases there was a clear distinction between Governance and Administration functions and very often there was a clear temptation to add more responsibilities to the governance structure that in our proposal belongs to the administration field.

<table>
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<tr>
<th>Questions</th>
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<th>2</th>
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<th>5</th>
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<tbody>
<tr>
<td>A. Do you consider the proposal model adequate?</td>
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<td>B. Do you consider it necessary?</td>
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<td>C. Do you consider the proposal model will contribute for the success of next transformations processes?</td>
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<td>D. Had it in your power would you support the implementation of a governance model?</td>
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<td>E. Had it in your power would you support the implementation of the proposed model?</td>
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Figure 12 – Interview Agreement Questions
Agreement questions (Figure 12) were intended to assess, among the respondents, the correlation with the designed model.

The overall evaluation (Figure 13) is very high, as all answers range between 4 and 5, leading us to conclude that our proposed model is welcome in practice.

### Questions

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<tr>
<td>1.</td>
<td>Do you consider necessary to have a governance model for procurement in Public Administration? Why?</td>
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<td>2.</td>
<td>Do you consider that public entities are able to settle an articulation schema for a common goal without a top orchestration? Why?</td>
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<td>3.</td>
<td>Did you ever felt the need of an explicit governance model in public services? Why?</td>
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<td>4.</td>
<td>List the advantages of implementing a governance model for public procurement</td>
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<tr>
<td>5.</td>
<td>List the disadvantages of implementing a governance model for public procurement</td>
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<td>6.</td>
<td>Which kind of governance structure you consider more adequate: fixed one (creating another public entity) or set this competence in a existing one) or flexible one (as proposed)? Why?</td>
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<td>7.</td>
<td>With growing complexity on the services that will have to implement in near future if there is no governance structure which alternatives do you consider will solve the same problems?</td>
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<td>8.</td>
<td>If you could propose changes to the model which ones would be? Why</td>
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Figure 14 – Interview Open Questions
With the open questions we wanted to find the arguments on which the interviewees based their opinion, namely the advantages and disadvantages of a generic governance model for public procurement. Some of the answers should be highlighted:

- On the disadvantages of a generic governance model: “a significant risk of simply creating more bureaucracy, more control loops”.
- On the type of structure for the governance model: “variable geometry to be adapted as time goes by, and rather than a strict hierarchical structure must really correspond to a collaborative network of entities”.
- On the advantages of a generic governance model: “Coordination, better implementation, integration, shared vision and objectives, better visibility into the process”.
- On the changes to the model topic: “Consider the possibility of having permanent staff to monitor the implementation and the performance of the model and to guarantee adequate transmission of decisions”.
- On the question about the need for an explicit governance model in public services: “Yes. In several public procurement reforms that I implemented and experienced in different countries there was always the need to develop a governance model. No reform can succeed without a solid governance structure”.

It is possible to say that all the interviewees can list more advantages than disadvantages of implementing governance models and they all underline the importance of this type of solutions for a successful implementation of public policies.

7. CONCLUSION

Public procurement is a crucial pillar of strategic governance and services delivery for governments. Because of the sheer volume of spending it represents, well governed public procurement can and must play a major role in fostering public sector efficiency and establishing citizens’ trust. Well-designed public procurement systems also contribute to achieving pressing policy goals such as environmental protection, innovation, job creation and the development of small and medium enterprises [OECD 2015].
With our contribution, we aim at a paradigm shift in current public procurement leading. We also aim that governance becomes more than an interesting topic in literature and it becomes a concrete reality in Public Administration.

The 2014 European Directives stress out the governance topic in the public procurement legal framework that will be transposed to national laws in all EU Member States, the latest, by April 2016.

In Portugal there has been no integrated vision of public procurement so far and all the achievements depended on the performance of individual public entities.

To address all these questions a governance scheme is necessary and we designed a model based on enterprise ontology, namely based on a methodology (DEMO) with a strong theoretical background, thus using the existing knowledge in an innovative way (one of the design-science research objectives).

Using DEMO for the representation of our proposal surely brings a certain “purist” stance in the sense that we can have pure “objective” and “essential” models of reality. However, one cannot talk about purely ontological and purely objective observations of reality. Humans are always constrained by available resources and the goals they have in mind. So models produced will always be biased by a certain motive and dependent on implementation issues, including the resources available for the modelling process itself [Pombinho, Tribolet, & Aveiro 2014].

This proposal was evaluated by three senior experts from entities highly involved in public procurement. The overall feedback is very positive but we cannot forget the fact that it was not tested in practice and, for the time being, it can only be considered as a theoretical reference for any solution to be implemented in the future.

From our research point of view the most positive aspects of the model are:

- It represents an additional layer to the existing reality;
- It will not increase the costs with the creation of a new public body;
- It addresses transformation as a distinct dimension when compared to the common operational daily tasks (administration), as advocated in the governance definition.
- It clearly distinguishes policy competences from technical competences;
- It clearly defines who should be at each level;
Although for demonstration purposes it specifically addresses the Portuguese Public Administration case, its principles can be adapted to any Public Administration, particularly in those cases where responsibilities are distributed among several public entities.;

- It demands transparency and accountability as one of the pillars for sustainability development;
- It requires a repository of all types of documentation on the conduction and monitoring of the transformation process;
- It has an inherent obligation to ensure a communication structure as well as gather feedback from all stakeholders.

The less positive points are:

- A flexible structure implies that people in charge accumulate these with other functions, a situation that may create a conflict as regards the time to be allocated to the necessary involvement.
- Flexible structures do not have their own resources, which may reduce capabilities if the existing administration structures cannot incorporate additional features.
- The model, per se, does not ensure that leadership in its essence will depend on the characteristics of the individuals appointed to perform key roles.

The convergence of the designed governance model with the problem definition does not indicate that the proposal is fully complete; it only indicates that the proposal is compatible with the realities of the given case. However, the positive feedback obtained with the interviews gives a qualitative sense of confidence about the usefulness of the solution proposed.

REFERENCES


